



The Decipherment of Ancient Maya Writing

**Edited by Stephen Houston
Oswaldo Chinchilla Mazariegos
and David Stuart**

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Stephen Houston,
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&

David Stuart

UNIVERSITY OF OKLAHOMA PRESS
Norman

Library of Congress Cataloging-in-Publication Data

The decipherment of ancient Maya writing / edited by Stephen Houston, Oswaldo Chinchilla Mazariegos, and David Stuart.

p. cm.

Includes bibliographical references and index.

ISBN 0-8061-3204-3 (alk. paper)

1. Mayan languages—Writing. 2. Inscriptions, Mayan.

I. Houston, Stephen D. II. Chinchilla Mazariegos, Oswaldo Fernando, 1965– III. Stuart, David, 1965–

F1435.3.W75 D39 2001

497'.41511—dc21

00-041796

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1 2 3 4 5 6 7 8 9 10

To our beloved spouses:

Nancy Dayton Houston,

Silvia Villacorta de Chinchilla,

&

Bridget Hodder Stuart

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Preface

The decipherment of Maya hieroglyphs began in earnest well over a century ago. In the ensuing years scholars and enthusiasts from many backgrounds have contributed to understanding and interpreting Maya script. Today, at the close of the twentieth century, we can confidently say that this cumulative effort has been successful, with many of the ancient inscriptions now finally readable in Mayan languages (M. Coe 1992; D. Stuart and Houston 1989). Given the long decades of scholarship, it is small wonder that the writings on decipherment are vast in number. However, we have found it surprising how many of the important early works in Maya epigraphy are today neglected or underappreciated. Many articles and papers, it is true, are found only in obscure journals and conference proceedings, and the fast pace of modern advancements leaves little time for much historical reflection. Nevertheless, it would be quite mistaken to believe that the decipherment is only a modern achievement that began in 1952, 1960, 1973, or 1987. Rather, we consider that nearly every decade since the eighteenth century has seen its own breakthroughs, many of them still relevant to the forefront of modern epigraphic research. In compiling these readings on Maya decipherment, we have therefore attempted to illustrate an exciting intellectual journey toward what some writers have called “the Last of the Great Decipherments” (Chippindale et al. 1988: 121). We have selected pieces not just to show the tangible results of what can now be read, but to reveal the different processes and philosophies behind decipherments—some valid in our view, others not—and to make apparent the social and political settings that condition research.

This compilation represents the pieces of a history of ideas rather than a history of Maya decipherment *per se*. For that, we recommend the excellent accounts by Michael Coe (1992) and George E. Stuart (1992b). As these writers vividly show, the methods and approaches to decipherment changed considerably as the understanding of the Maya script became more and more refined. In reviewing the story of Maya decipherment and its colorful figures, however, it is important that we do not pass judgment too quickly on earlier researchers who were, as we now know, somehow mistaken or otherwise misguided. For our purposes, the many failures at decipherment are as interesting as the successes, for they reveal how previous scholars thought, how the scholarly community grew and mingled, and how ideas related to broader intellectual trends of their day.

The resulting work has benefited from the advice and help of many friends and colleagues. Michael Coe and George Stuart offered many useful suggestions, and we have profited enormously from their profound knowledge of the history of Maya studies. We also acknowledge the kind help and comments of Carlos Álvarez (Universidad Nacional Autónoma de México [UNAM]), Whit Bell (American Philosophical Society), Elizabeth Boone (Tulane University), James Brady (California State University, Los Angeles), Terry Clifford (American Anthropological Association), Paula Covington (Vanderbilt University), Pat Culbert (University of Arizona), Rémy Darrieulat (Université de Paris I), Connie and Charles Dayton (of North Haven, Conn.), Arlene Ennis (American Association for the

Advancement of Science), Susan Evans (Pennsylvania State University), Janine Gasco (then of the State University of New York, Albany [SUNY]), Ian Graham (Peabody Museum, Harvard University), John Hawkins (Brigham Young University), Catherine John (Academic Press, UK), Kevin Johnston (Ohio State University), Christopher Jones (University Museum, University of Pennsylvania), Justin Kerr (Kerr Associates), Tom Killion (Smithsonian Institution), Michael Love (California State University, Northridge), Peter Mathews (La Trobe University), Patricia McAnany (Boston University), Joy McCorrison (Ohio State University), Mary Ellen Miller (Yale University), John Monaghan (Vanderbilt University), Susana Monzon (Société des Américanistes), Philippe Nondedeo (Université de Paris I), David Pendergast (Royal Ontario Museum), Berthold Riese (Universität Bonn), John Robertson (Brigham Young University), Merle Greene Robertson (Pre-Columbian Art Research Institute), the late Linda Schele (University of Texas, Austin), Robert Sharer (University Museum, University of Pennsylvania), Guy Stresser-Pean (of Mexico City), Bridget Hodder Stuart (of Marblehead, Mass.), Eric Taladoire (Université de Paris I), Karl Taube (University of California, Riverside), Emily Umberger (Arizona State University), Khris Vilella (College of Santa Fe), Evon Vogt (Harvard University), and David Webster (Pennsylvania State University). Academic Press (UK division), *American Anthropologist*, the Center for Maya Research, Harvard University Press, the Institute for Mesoamerican Studies—SUNY Albany, Kerr Associates, the Pre-Columbian Art Research Institute, UNAM, and the University of Oklahoma Press authorized publication and, in most cases, waived fees. John Justeson and John Pohl reviewed the volume; in many instances we have taken account of their useful suggestions, although we are not in complete agreement on some points. Justeson, for example, recommended the inclusion of the most recent works, including some of our own, but this has not been our principal objective in this volume (see the introduction).

This book would not have been possible without the generosity of Brigham Young University, Professor Clayne Pope, dean of the College of Family, Home, and Social Sciences, and, especially, Professor John Hawkins, former chair of the Department of Anthropology, as well as the Wenner-Gren Foundation for Anthropological Research (#5244-4201, to Oswaldo Chinchilla), all of whom helped fund the preparation of this book. Considerable support also came from the National Endowment for the Humanities, Collaborative Projects Category, for a grant to Houston and Stuart (Grant RO-22648-93). None of these friends and institutions assume responsibility for the opinions presented here.

Colleagues at Yale University, especially Professors Michael Coe, Frank Hole, and Richard Burger, assisted greatly with a research and curatorial affiliation for Stephen Houston in the spring of 1994. At Vanderbilt University, we profited from the diligent assistance of Shane McCorkle, and at Brigham Young University from the cheerful and competent help of Holly Sullivan, along with enormous aid from Tara Ames, Bruce Bachand, Cindy Eccles, Jesse Morgan, Zac Nelson, and Tyler Westerberg. Our translators, David Debry (German), Bryan Dewitt (French), Jason Roberts (French), and Inez Verhagen (German), provided excellent, gratis work. All other translations are by Houston and, especially, Chinchilla, who was chiefly responsible for the early authors, including early Colonial sources as well as Brasseur and de Rosny. Among the editors this was truly a collaborative effort: Houston and Stuart began and conceptualized the project; Chinchilla and Houston wrote most of the introductory sections and biographical commentaries, improved by suggestions and rewrites from Stuart; and Houston finalized the volume at Brigham Young, availing himself of the language expertise that is a hallmark of this university. We thank all of those who made this enterprise possible, but especially our wives, Nancy, Silvia, and Bridget, to whom we dedicate this book as a measure of our devotion.

Acknowledgments

First, we credit the kindness of Lic. Carlos Álvarez, Centro de Estudios Mayas, UNAM, for approving republication of the article by David Kelley, "Kakupacal and the Itzas," which first appeared in *Estudios de Cultura Maya* 7 (1968): 255–68. Justin Kerr of Kerr Associates very generously agreed to publication of "Hieroglyphs on Maya Vessels" by David Stuart (the copyright holder). Other permissions follow:

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*The Decipherment of
Ancient Maya Writing*

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Introduction

After more than a century of concerted efforts by scores of scholars and enthusiasts, it can now be said that the Maya hieroglyphic system has been deciphered, although, to be sure, doubts remain about certain elements. This book does not stand as a description of this rich ancient script—arguably the most complex form of writing ever devised in antiquity—but rather chronicles the people and ideas behind the triumph of the decipherment itself. We see that the paths to decipherment have had more than their fair share of detours and dead-ends amidst the occasional breakthroughs and steady, incremental advances. But what stands out among these stories is that there was never really a Jean-François Champollion or Michael Ventris to break open Maya epigraphic studies. Instead, the contributions of a great many men and women shaped the discipline, making it a fascinating case-study of intellectual history and documenting how a core methodology through which Maya glyphs can now be studied came to be established.

We have opted to let the participants in this intellectual journey speak for themselves; hence the collection of articles and excerpts to follow. We have designed this work to stand alone as a sourcebook for students of Maya writing and culture, but it has been conceived as a companion volume to *Ancient Maya Writing*, a volume now under preparation by Houston and Stuart, with the valuable assistance of John Robertson of Brigham Young University. Quite simply, we felt the history of decipherment deserved a full and self-contained treatment apart from a more descriptive treatment of Maya script and grammar, especially through the presentation of pivotal documents.

The most complete account of the decipherment presented thus far is Michael Coe's *Breaking the Maya Code* (1992), published soon after this volume was initially conceived. As Coe rightly observes, our story does not involve "code-breaking," which focuses narrowly on the process of decryption, so much as understanding why people drew certain conclusions about Maya writing and why some approaches were accepted and others rejected. An individual's world view, shaped by expectations and experience, establishes the conditions through which a scholar espouses certain ideas and rebuffs others. We cannot hope to provide a complete social and ideological context for every important contributor who is here celebrated, but we do attempt to set the stage as much as possible.

PHILOSOPHICAL APPROACHES TO THE HISTORY OF MAYA DECIPHERMENT

By no means is this the first attempt to examine the history of Maya hieroglyphic decipherment. Several such studies can be found scattered among the literature of the

field, ranging from J. Eric S. Thompson's magisterial review of 1950 (Thompson 1950: 28–34) to David H. Kelley's later but very different perspective, which, unlike Thompson's, took a highly sympathetic view of phonetic approaches (Kelley 1962a, 1976: 308). Yet the most detailed treatments are also the most recent, namely, George Stuart's "Quest for Decipherment" (G. Stuart 1992b) and Michael Coe's *Breaking the Maya Code* (1992). Replete with bibliographical detail, Stuart's history contains a wealth of new information.¹ Stuart clarifies several past misconceptions—the confused history of the Paris Codex and its discovery—and reacquaints us with neglected figures such as the colorful early nineteenth century polymath Constantine Rafinesque-Schmaltz.

Coe's book is different in its tone and goals. Where Stuart emphasizes the factual outlines of decipherment as reflected in its published history, Coe infuses biographical details and anecdotes, including entertaining and illustrative ones of his own. His history is one of ideas and people, and he often passes judgment on his colleagues and precursors. Sir Eric Thompson, the dean of Maya studies throughout much of the twentieth century, receives criticism from Coe for what is perceived to be a certain amount of intellectual arrogance.² In contrast, the Soviet scholar Yuri Knorosov triumphs in Coe's treatment as the steadfast advocate of innovative and ultimately successful approaches to decipherment.³ However one might agree or disagree with Coe's assessments of Mayanist personalities and scholarship, there is little doubt that he has inspired an informative and useful debate, demonstrating that the history of Maya decipherment is worth sustained scholarly attention. In this, Coe follows the comparative example set by Maurice Pope (1975), who wrote one of the most informative books on the processes involved in archaeological decipherment.

Beyond the descriptive outlines of decipherment lie larger questions about the nature of changes in epigraphic knowledge. Inevitably, such topics begin to touch on issues in the philosophy and sociology of science. Epigraphy can be understood in terms of several models of epistemological change (Kourany 1987: 228–33). For example, the discipline may be seen to develop cumulatively, so that additional knowledge builds on earlier information. An example of this is Ernst Förstemann's work on calendrical hieroglyphs, which rests on Charles Brasseur's discovery of the sign for "day," *k'in*. Alternatively, Karl Popper might envision a more dramatic series of developments, in which new theories replace earlier ones through a process of Darwinian selection, "allowing the more well-adapted theories to survive and be transmitted in turn" (Kourany 1987: 230; see Popper 1975). In this scenario, a generally accepted decipherment for a glyph might ultimately prove to be false in the face of overwhelming evidence for a sounder reading. Thus Eric Thompson's (1937) reading of a "fish" sign as *xok*, "shark count," accepted by virtually all scholars up to the 1980s (e.g., Kelley 1976; Schele and Miller 1983; but see Bricker 1986b for a dissenting view), came to be replaced quickly in epigraphers' analyses by the more productive value *u* (D. Stuart 1990).

A related way of viewing the long-term development of Maya decipherment involves the concept of the "paradigm" as advanced by Thomas Kuhn in his often-cited work on the history of scientific thought (Kuhn 1970: 10; Trigger 1989: 5). The key to the paradigm concept is a more sophisticated understanding of sociology, so that "when theories change, the world of scientists, their methods, and their goals . . . change as

well" (Kourany 1987: 231). A proponent of this model might easily point to the advances brought about by the works of Heinrich Berlin and Tatiana Proskouriakoff, who, working separately, not only tested selected ideas, but revolutionized epigraphy by introducing a new mindset about the nature of hieroglyphic inscriptions. What they specifically offered the discipline was a completely new way of ordering and classifying information.⁴ Paul Feyerabend argues that such alterations of mindset may occur *despite* negative evidence and empirical problems (Feyerabend 1988: 21–22; see also Brannigan 1981: 7; Cole 1992: 200).

A final philosophical perspective is the "gradualist" one that distinguishes between distinct yet interrelated trajectories of theories, methods, and goals. In the case of Maya decipherment a theory (a proposition about the logographic and phonetic units of glyphic spelling) came well after a method (the structural technique pioneered by Hermann Beyer) that would eventually help refine the theory. At present, goals vary from phonetic decipherment, grammatical elucidation, and historical reconstruction to the "empowerment" of modern Mayan speakers through training (by non-Maya) in lowland glyphic writing. Increasingly integrated, they nonetheless move in their own directions, at their own tempo, and according to their own underlying assumptions. This complexity is what makes intellectual history so fascinating. It militates against the "brainwashing," which goes "a long way in making the history of science duller, simpler, more uniform, more 'objective' and more easily accessible to treatment by strict and unchangeable rules" (Feyerabend 1988: 11).

To us, the "gradualist" approach offers the most satisfying framework. Knowledge does not simply accumulate, but passes through subsequent winnowing, acceptance, and refutation. Ideas do not necessarily survive only because of their intrinsic or "adaptive" merits; nor is Kuhn convincing in downplaying the coexistence of different paradigms (Trigger 1989: 6). As John Robertson (personal communication, 1996) reminds us, there *has* been progress, with (we presume) ever-greater correspondence to ancient Maya understandings of glyphic script. The astronomical and calendrical orientation of early Maya epigraphy flourishes. It once again, as in Eduard Seler's day (see Schellhas, this volume), influences the interpretation of Maya iconography (Freidel et al. 1993). Critical features, some in place for many years, have been incorporated into a productive synthesis that will doubtless change with future work. In another context, Michael Coe lists these features as a "large and well-published database," a "known language," "one or more bilingual texts," a "well-understood cultural context," and "accompanying pictorial references" for a logographic or logosyllabic script (Coe 1995: 393). Individually, these are the most crucial elements of decipherment, although advances can be made in their absence.

Over the decades, several "schools" of decipherment emerged in Europe and the United States, defined generally as groups of like-minded scholars endorsing similar theory, methods, and goals. One such intellectual community coalesced around Yale University in the 1960s and evolved into a school of thought that came to be associated with yearly gatherings at the University of Texas.⁵ Such methodological communities have continued to persist to the present day, although they are hardly monolithic entities: increased networking among scholars has tended to blur such boundaries in recent

years, a testimony to the overall consensus that has begun to emerge in the field. In the future, new schools will no doubt emerge, as epigraphers begin to focus on new issues and questions, from which new debates and differing perspectives will no doubt arise.

Maya epigraphy is scarcely a battlefield in the sociology of knowledge, but the sounds of strife sometimes have drifted over our discipline from time to time. In the philosophy of science, a basic conflict exists between those espousing philosophical “realism”—the notion that our scholarly accounts reflect real truths in the world—and “antirealism,” which holds that “theories of science are . . . useful fictions, convenient methods of representation” (Kourany 1987: 338).⁶ Antirealism shares many features with Postmodernism, with its emphasis on discourse and socially contingent knowledge. “Discovery . . . is a social process” (Brannigan 1981: 167) authorized by communities whose ideas result from rhetorical persuasion and consensus (cf. Trigg 1993: 163–64). Groups of “mediators” socialize young scientists and determine the nature and importance of discoveries (Brannigan 1981: 167). The past does not escape the effects of these social networks: it is edited and reordered until it conforms to and resembles “contemporary understandings” (Brannigan 1981: 167; see also 170–76). Indeed, it is naive to regard the past as an autonomous narrative, “caught by surprise, without the observer being implicated” (Clark 1985: 189). From this it follows that sociologists trying to understand the conduct of science cannot prepare a single definitive account. Rather, their task is to record a “proliferation of accounts” in which the content of a participant’s observations may be “confusing and internally irreconcilable” (Mulkay 1991: xvi). Moreover, since science is both in and of society, we must consider issues of morality and value (Richards 1983: 147). What are the consequences of our assertions? Who is affected by them? Perhaps most importantly, we, like archaeologists working in many areas of the Americas, must ask ourselves if the discipline of Maya glyph studies—at first glance a somewhat insular and esoteric enterprise—has some moral and practical responsibility to the Maya of the present day (Schele and Grube 1996). Many Maya of Guatemala and Mexico today derive considerable emotional, religious, and political satisfaction from reading the sacred texts of their cultural ancestors. This is a natural end-result of modern decipherment, but it presents some fascinating and troubling questions of its own that we will leave for some other, more polemical setting.

The self-reflective aspects of our field lead us to confront our own thinking about the history of decipherment. Is the development of Maya decipherment what we think it is? There is a strong inclination to divorce ideas from their setting, to regard, say, Genet’s suggestions about historical content in Maya writing in isolation from his retrograde ideas about “pictographs”: they are of a piece. We should also regard with suspicion the notion that “multiple discoveries” reveal either a mystical process of epistemological maturation (Kroeber 1917) or triumphal convergence on the path to truth (although there are occasional pragmatic grounds for thinking that such convergence is taking place). Often, different motivations lay behind the work; different things were being said, different conclusions drawn.

The decipherment of the *way* glyph, a sign for “companion spirits” (see Houston and Stuart, this volume), is a case in point (Coe 1992: 256–57; Schele and Freidel 1990: 420). Houston deduced it primarily from patterns of phonetic substitution, Grube initially from

iconography and a consideration of Yucatec nagualism. The shamanistic implications of the reading are still open to debate, involving as they do difficult questions of continuity in ritual and belief (see Grube and Nahm 1994). The same phonetic and logographic reading was achieved, with sturdy implications for a realist position, but with varying motivations and interpretative results around the reading. “[S]cientific successes cannot be explained in a simple way” (Feyerabend 1988: 1). Moreover, specialists need to keep in mind the very real difference between close decipherments of sound and meaning and more remote interpretations that purport to be general translations into modern languages.

ASPECTS OF CURRENT DECIPHERMENT

In looking at decipherment, we espouse a modified “realist” perspective. Realism explains the continued success of decipherment (Kourany 1987: 339). It does not confuse the object—Maya writing—with the analysis of that object—decipherment (Trigg 1993: 155). Maya glyphs exist out there. They record specific, verifiable sounds and meanings, even though researchers may approach them differently, from a variety of mindsets. Since glyphs were clearly meant to be read, there is potential firmness in their decipherment, not just the loose chains of semantic associations occasionally propounded by Eric Thompson and justifiably criticized by Michael Coe (Coe 1992: 141). There is, in short, some “thought-independent reality that our thought has some hope of describing” (Brown 1994: 39).

Decipherment can proceed on two realist grounds: through “justification,” partial and increasingly strong decipherments not yet fully verified; and “falsification,” a review of a proposed reading’s weaknesses (Kourany 1987: 144–45). Ideally, a reading should show “accuracy” (agreement with current evidence), “consistency” (accordance with theoretical precepts and expectations from Maya writing and other scripts), “scope” (movement beyond what it was designed to explain), “simplicity” (satisfactory organization of information), and “fruitfulness” (serendipitous detection of unnoticed things; Kourany 1987: 119; see Kuhn 1977). In evaluating prior work, we should avoid looking at it solely in terms of present knowledge—as a selection of ideas leading ineluctably to current understanding; rather we should see it according to its merits at the time: Were its conclusions justified by theory and evidence then available? Was it, in Kourany’s terms, accurate, consistent, adequate of scope, simple, and fruitful by the standards of the time?

At present, Maya decipherment contains both “core” and “frontier” components (Cole 1992: 229–30). To borrow Stephen Cole’s terminology, the core is that “small body of knowledge that the community of science accepts as both true and important . . . The frontier consists of all knowledge produced by community members. Only a very small portion of new knowledge moves from the frontier to the core” (Cole 1992: 230). The “schools,” the sociological entities of interest to antirealists, usually do not affect core knowledge, although they may influence the “attention of the scientific community” through peer pressure and statements to the press (Cole 1992: 231). Core beliefs now include acceptance of the logosyllabic nature of the Maya script, the usefulness of morphosyntactic approaches, the historical, titular, and ritual content of glyphs, and the

presence of references to astronomy and mythic-supernatural world (see Kelley's enumeration of core epigraphic knowledge, 1976: 7–8). Strong disagreement can arise, and often does, when we seek to shift “frontier” beliefs to the “core.”

Such disputes often stem from continued uncertainty about the process and nature of decipherment. To Sylvanus Morley, a “decipherment” could be a firm Long Count placement for an eroded date (see Morley 1937–38). Many texts reproduced in his *The Inscriptions of Peten* appear only with calendrical data—the rest of the text is clipped off, since, presumably, it failed to interest Morley or relate to his principal focus on dates.⁷ In *Maya Hieroglyphic Writing*, Eric Thompson outlines both the methods of decipherment (attention to “mathematical” associations, codical divinatory signs, affixes, and patterns of interchangeability; Thompson 1950: 263) and its aims (“our ultimate objective is not the literal word-for-word decipherment of the glyphs, but a fuller comprehension of the mentality, the poetic concepts, and the philosophical outlook of the Maya”; “our duty is to seek more of those mythological allusions”; Thompson 1950: 295). Implicitly, Thompson adopts ad hoc, personal criteria of decipherment that result from his ideas about the structure and content of Maya writing. He approves of a reading for two reasons: if it renders a homophone or grammatical particle that is convincing to him personally (Thompson 1972b: 33) or if, as an ideogram, it reveals anagogical truths, again as judged by Thompson himself (Thompson 1950: 295).⁸ Since glyphs have many mystical meanings, some will evade ready decipherment. It is the task of the epigrapher to target less the proximate system (the glyphs and the elements of speech they record) than the ultimate system behind it (the underlying set of recondite ideas conveyed by script). As with any scholar, Thompson's research goals are not always consistent across the range of his career. He was clearly interested in particular readings of signs and did attempt to establish specific linkages between glyphs and elements in modern Mayan languages.

David Kelley provides a definition of “full decipherment” that continues to be valid in its essentials. A decipherment “involves recognition of the object depicted, knowledge of the phonetic value of the glyph, knowledge of its meaning or meanings, and understanding of how these are interrelated” (Kelley 1976: 246). At root here is what Thomas Barthel calls “category-bound deciphering” (quoted in Kelley 1976: 246), although it can be extended in ways of which Barthel, who was no enthusiast of phonetic approaches, would have disapproved. There are other definitions of decipherment, including an excellent one by Justeson: “decipherment is neither more nor less than a process of accounting for patterns of sign use in script” (personal communication, 1996). In contrast, Peter Daniels proposes that decipherment must determine “the relation between some writing not hitherto understood and the language it represents” (Daniels 1996: 141). One gathers that, for Daniels, the true decipherers are those propounding entirely new or hitherto undetected principles, not those detecting minor patterns or merely “filling-in . . . details” (Daniels 1996: 142). For us, Daniels' grand distinction between primary decipherment and secondary mop-up seems meaningless, although it may apply to his highly developed field of cuneiform studies. Any novel idea that elucidates a recalcitrant problem deserves attention and respect, for this can sometimes lead to unexpected, momentous results.

As mentioned before, we concur with Coe that these steps require a large, accurately recorded database, a known language, bilingual texts (no matter how limited, as in Diego de Landa's *abecedario*), a well-studied cultural setting, and accompanying pictorial references (M. Coe 1995: 393); like Daniels, we also see the importance of identifying proper names in decipherment (Daniels 1996: 143). The marriage of iconography and epigraphy is one of the great strengths of Maya studies (see Coe, this volume); the absence of such elements, including a secure relation to language, seriously weakens claims to other decipherments in Mesoamerica, including that of the La Mojarra script from Isthmian Mexico (Houston 1996: 430–31). Here, then, is our idiosyncratic list of steps to Maya decipherment, presented with the understanding that some methodological steps can be explored independently of others. The epigrapher must:

- Segment texts into clauses, subclauses, and other constituent elements
- Classify elements of texts by grammatical, titular, onomastic, temporal, and toponymic function
- Investigate mathematical and astronomical features of calendrical notations
- Classify signs by their probable phonetic or logographic value
- Classify signs according to present knowledge of sign variance
- Classify signs according to present knowledge of sign equivalence
- Use a corpus of texts to define classes of substitutables, with controls in place over syllabic and logographic values; falsify apparent phonetic and logographic substitutions
- If a sign is logographic, determine its phonetic complementation; if it is syllabic, determine whether attached to logographs; find comparable spellings in glyphic corpus
- Determine from the corpus if logographic readings have
 - (1) grade 1: full substitution by phonetic signs, with contextual control to establish equivalence
 - (2) grade 2: prefixation and subfixation by phonetic signs
 - (3) grade 3a: only prefixation by phonetic signs
 - (4) grade 3b: only subfixation or infixation by phonetic signs
 - (5) grade 4: no subfixation, prefixation, or infixation, but presence of semantic control
 - (6) grade 5: no subfixation, prefixation, infixation, or semantic control
- Determine semantic references of logographs; explore possible homophonies
- Determine from the corpus if probable phonetic signs
 - (1) function in a specified context as phonetic, not logographic, signs
 - (2) have an iconic referent
 - (3) have as iconic referent explicable as the logographic origin of a phonetic sign (Justeson 1989: 33)
 - (4) exhibit vowel harmony with other, known phonetic signs
 - (5) complement known or deciphered logographs
 - (6) alternate in fully phonetic spellings with deciphered logographs

- (7) yield spellings explicable in terms of textual setting or accompanying images
- (8) survive a minimum of three testings in distinct glyphic settings
- Examine affixation of verbs; determine aspect; compare with linguistic expectations from attested Mayan languages, Colonial and modern
- Attempt linkages with accompanying images, the context of the inscription, and the known content of the inscription
- Compare readings with inductively inferred spelling conventions of Maya script; augment or modify conventions where justified
- Monitor the chronology of spelling conventions
- Transcribe signs and render them into morphological transliteration
- Translate the text; specify gaps in knowledge

Of course, these “steps” do not represent a prescription for decipherment. They form a checklist of strategies or an inventory of possible lines of inquiry. The list is generalized empirically from decipherments that have entered core knowledge and has little abstract meaning beyond its application to particular texts and signs. The epigrapher will have to decide individually whether a proposal is persuasive (i.e., accurate, consistent, of adequate scope, simple, and fruitful). Use of the checklist is productive in another way, in that it helps highlight gaps of knowledge. We have to know a reading’s weaknesses along with its strengths. Inadequate proposals cannot survive repeated testing against the corpus; nor can they rest convincingly on sparse or limited evidence.

PHASES OF MAYA DECIPHERMENT

In thinking about this collection of essays, we have generally followed George Stuart’s periodization of Maya decipherment—eyewitnesses, pioneers, early scholars, the period of institutions, and the “recent past” (G. Stuart 1992b: 1–2). Our Phase I corresponds to Stuart’s “eyewitnesses,” when those describing the writing handled glyphic documents, met native writers, and, in a few cases, acquired some facility in the script. Such individuals understood clearly the connection between hieroglyphs and Maya peoples. Similarly, Phase II matches Stuart’s period of “pioneers.” It begins with explorations that express a Bourbon interest in husbanding resources of the crown. At least indirectly, such visits, particularly to Palenque, reflect a growing concern with the works of “natural man.” The phase ends with the freer movement made possible by the wars of liberation and the subsequent relaxation of Colonial travel restrictions. Visits could now be made by anyone who had the funds and “stomach” (figuratively and literally) for sojourns in unsettled lands.

Our Phases III and IV, “early documenters” and “early scholars,” are precisely the same as Stuart’s. John Lloyd Stephens and Frederick Catherwood embody the “early documenters” in that they not only travel widely but document what they find with a fair degree of accuracy and restraint. The same cannot be said for the self-styled “Count” Jean-Frédéric de Waldeck (Cline 1947), whose drawings are nonetheless better than many have supposed (see Baudéz 1993: fig. 8). We place Brasseur, perhaps unfairly in view of his reading of the *k’in* sign, with the documenters rather than the scholars.

His interpretations incline at best to weakness and overstatement, if not outright fantasy. No one, however, can dispute his eminence as a sleuth of documents and ethnographica, such as the *Rabinal Achí* (Brasseur 1862).

We have decided to distinguish two types of “institutional phases”: the first phase consists of the earliest patrons and beneficiaries of such support; the second phase corresponds to the period of abundant institutional largesse, as supplied by the Peabody Museum of Harvard University, the University Museum of the University of Pennsylvania, and, most important, the Carnegie Institution of Washington, especially under the “pan-scientific” leadership of Alfred Kidder (Givens 1992: 77–119), who presided administratively over the distinguished careers of Eric Thompson, Tatiana Proskouriakoff, and others who provided evidence of the cultural setting critical to decipherment (M. Coe 1995: 393). This is a time when the “calendrical dogma”—the firm belief that calendrical and astronomical matters dominated Maya texts—became entrenched in epigraphic minds. Some people may appear out of place in this category. William Gates, Jean Genet, Paul Schellhas, John Teeple, and Benjamin Whorf were more-or-less independent (or founders of their own organizations, as in the case of Gates), but we include them here for chronological reasons and because many of their publications appeared under institutional auspices. In addition, that heroic documenter of our time, Ian Graham, represents the continuation of long-standing efforts at documentation going back to Alfred Maudslay and beyond.

The final period of “synthesis” still surrounds us and is therefore difficult if not impossible to place in any kind of historical perspective. Rather than label this the “modern” phase, which connotes, inaccurately, the completion or final refinement of epigraphic labors, we see it as a time when earlier themes have come together in a potent synthesis that has unquestionably improved our notions about Maya script and society. These themes include cross-cultural comparison, detailed expressions of sensitivity to iconography, testing of phoneticism, linguistic sophistication, studies of dynastic history, applications of ethnographic knowledge to hieroglyphs, and, in general, broadened access to a well-documented corpus, one of the key aids to recent decipherment.

Yet not all scholars fit cleanly into a particular period of decipherment. Although Barthel only recently died, we place this important researcher in the “institutional” second phase because of his distaste for phonetic approaches *sensu* Knorosov. Similarly, it may be misleading to suggest that Knorosov and his Russian students still participate in the international movement toward synthesis. Their recent work makes it clear that almost no overlap exists between their readings and those proposed by epigraphers in the United States, Germany, Guatemala, and Mexico (Knorosov and Yershova n.d.). This research shows a surprising inattention to, among other things, Mayan grammar, substitution studies refined by Beyer, bridges between glyphic spellings and morphosyntactic transliteration, and, most strangely, the logosyllabic principles pioneered by Knorosov himself. Presumably, Knorosov and his pupils now believe that syllabic signs represent a small portion of the script, a position we regard with great skepticism. Nowhere is there any clear evidence for the methodological basis of their readings. Another point to consider is that the period of synthesis is imbued with its own kinds of dogma, myth, and ideology. For example, the historical orientation that dominated epigraphic study for two

	Eyewitnesses	Pioneers	Early Documenters	Early Scholars	Institutional 1st
1995	Peter Martyr d'Anghiera (1456/57–1526) Hernán Cortés (1485–1547) Diego de Landa (1524–1579) Gaspar Antonio Chi (ca. 1531–1610) Antonio de Ciudad Real (1551–1617) Pedro Sánchez de Aguilar (1555–1648) Alonso Ponce (fl. 1589) Andrés de Avendaño (fl. 1705)	Jean-Frédéric Waldeck (?1766–1875) Constantine Rafinesque-Schmaltz (1783–1840) James Hugh McCulloh (1791–1869)	Alexander von Humboldt (1769–1859) Frederick Catherwood (1799–1854) John Lloyd Stephens (1805–1852) Charles Brasseur de Bourbourg (1814–1874)	Juan Pío Pérez (1798–1859) Ernst Wilhelm Förstemann (1822–1906) Philipp Johann Joseph Valentini (1824–1899) Cyrus Thomas (1825–1910) Charles Rau (1826–1887) Daniel G. Brinton (1837–1898) Léon Prunol de Rosny (1837–1914) Joseph T. Goodman (1838–1917) Eduard Georg Seler (1849–1922)	Teobert Maler (1842–1917) Charles Pickering Bowditch (1842–1921) Alfred P. Maudslay (1850–1931)
1950					
1900					
1850					
1800					
1750					
1700					
1650					
1600					
1550					
1500					
1450					

Timeline of glyph studies and its practitoners

Institutional, 2nd	Synthesis
Paul Schellhas (1859–1945) William Gates (1863–1940) John E. Teeple (1874–1931) Alfred M. Tozzer (1876–1954) Herbert Joseph Spinden (1879–1967) Hermann Beyer (1880–1942) Sylvanus Griswold Morley (1883–1948) Linton Satterthwaite (1897–1978) Benjamin Lee Whorf (1897–1941) John Eric Sidney Thompson (1898–1975) Jean Genet (1903–1934) Alberto Ruz Lhuillier (1906–1979) Günter Zimmermann (1914–1972) Thomas Barthel (1923–1997)	Tatiana Proskouriakoff (1909–1985) Floyd Lounsbury (1914–1998) Heinrich Berlin-Neubart (1915–1988) Yuri Valentinovich Knorosov (1922–1999) Ian Graham (1923–) David Humiston Kelley (1924–) Michael D. Coe (1929–) Christopher Jones (1937–) Victoria R. Bricker (1940–) Linda Schele (1942–1998) Barbara MacLeod (1943–) James Fox (1944–) Berthold Riese (1944–) John Justeson (1950–) Peter Mathews (1951–) Mary E. Miller (1952–) Karl A. Taube (1957–) Stephen Houston (1958–) Nikolai Grube (1962–) David Stuart (1965–)

decades says more about the concerns of researchers than it does about the inscriptions. The genealogies and historical narratives prepared by epigraphers are not always Maya constructs, but often the results of our own need to organize information.

The recent synthesis of approaches and methods began in earnest with the increased interaction among scholars in the 1970s, as the Yale “school” came to the fore of decipherment and gained considerable attention within the larger field of Maya studies. Instrumental in this process were the Mesa Redonda meetings held at Palenque beginning in 1973. These meetings are often seen as epochal foci of decipherment, particularly in Mathews and Schele’s (1974) seminal presentation of Palenque’s dynastic history (e.g., M. Coe 1992: 193–217). While the sense of breakthrough was felt by all, it is interesting, in hindsight, that only a very few specific glyph readings from the early Mesa Redonda period have passed scrutiny. Moreover, Heinrich Berlin had several years earlier determined the name glyphs and important dates for several Palenque dynasts (Berlin 1968). Nonetheless, the Mesa Redonda represented, in the words of one reviewer of this text, an “active cluster of collaborating scholars” that had worked to mutual benefit in furthering connections between history and language. Its ultimate role in decipherment will need to be evaluated at some future time, with the benefit of greater detachment and distance from research by its principals, some of whom remain active. (Floyd Lounsbury and Linda Schele, both gifted epigraphers and principal contributors to the excitement of that period, died in 1998.)

We believe another significant period began about 1985, partly as a result of investigations by the Mesa Redonda group, but with substantial contributions from people who did not participate in those sessions. Maya pottery texts, recorded by Nicholas Hellmuth and especially by the ever-generous Justin Kerr, invited epigraphers to reflect on the tidy substitution cipher identified over a decade before by Michael Coe (1973). This was the “Primary Standard Sequence,” which encouraged specialists to confront the concrete, object-specific aspects of script, the names of pots, and, later, through coeval work at Copan, the terminology and personal names of buildings and monuments (Houston and Taube 1987; Houston, Stuart and Taube 1989; D. Stuart 1989). Researchers became increasingly aware that inscriptions are also archaeological artifacts, designed to be seen and read in a particular setting. From clear substitution patterns in the Primary Standard Sequence came a renewed attack on phonetic signs, many being deciphered between 1985 and 1990, including the crucial elements used to spell prevocalic possessive pronouns, possibly the most significant grammatical insight of the period. Aside from the editors, Nikolai Grube, Barbara MacLeod, and Werner Nahm collaborated on this work. Building partially on Linda Schele’s earlier research (Schele 1982), Victoria Bricker, Kathryn Josserand, John Justeson, and Barbara MacLeod brought linguistic rigor to this period, researching respectively the interaction of glyphic spellings and their morphosyntactic motivation, patterns of discourse and text composition, the inductive inference of spelling rules, and verbal affixation. There is ample evidence of a tangible acceleration in decipherment, although not necessarily at a steady pace. Among the most recent work has been a brilliant synthesis by Grube and Simon Martin of historical patterns of the Classic Maya (Martin and Grube n.d.). The epilogue of this book presents speculations about the future of Maya epigraphy.

BEYOND DECIPHERMENT: EVALUATING THE VERACITY OF MAYA INSCRIPTIONS

The discovery of historical records in Maya texts lately has raised some important issues on the role of such records in the overall reconstruction of past societies. In essence, these arguments concern how specialists in Mesoamerica should go about analyzing and interpreting Maya historical documents of the Classic period (ca. A.D. 250–850). Typically, scholarship approaches Classic Maya history according to several premises. The first corresponds to what might be described as “truth-seeking,” the notion that we can search for “facts” and “historical truth” in two ways, one literal, the other not. The literal point of view is that Maya hieroglyphs contain accurate records of the past that can be accepted on good faith. Decipherment opens such records to modern compilation and retelling. The other, more cautious approach reveals historical truth by employing the methods of “historiography,” the balancing, sifting, and weighing of authors and sources. From this emerges, it is thought, a reasonably accurate chronicle of the past (Nicholson 1971). The corollary of historiography is the view that history, as constructed by everyone but sound Western researchers, requires close, critical scrutiny, because indigenous accounts may well be self-serving, tendentious, or even propagandistic narratives that rework and codify memories of the past and representations of the present (Price 1980: 159, 177). The notion of propaganda itself springs from the view that Classic elites control society—that is, they influence opinion and induce desired actions—through coercive threat or other, more subtle and potentially stronger forms of suasion (Marcus 1992: 7). By applying proper methods, the historian cleaves the fictional or distorted overlay from its truthful substrate (Michalowski 1983: 237–38). Some scholars do not believe that even this is possible, contending that the Maya record is so murky that such methods will never provide convincing results; these must come instead from the “point of the trowel,” since, one presumes, archaeological data are inherently more objective than historical records (Marcus 1992: 445).

Another approach to Classic Maya history focuses not so much on underlying truths as on the patterning within historical narratives, stories we are invited to regard as no “more true than any other” (Michalowski 1983: 238). The philosophical basis for this approach derives from Immanuel Kant’s *Critique of Pure Reason*, which presents, among other things, the view that the “phenomenal world is structured by mind-contrived conceptual underpinnings” (Gell 1992: 10). In a sense, the “‘real’ world is created by our ideas” (Gell 1992: 10). To phrase this in less radical terms relevant to our discussion, historical narratives tell us more about conceptual structures than about a hypothetical basement of historical truth. In consequence, scholars should concentrate less on establishing reliable accounts—perhaps a vain endeavor—than on understanding why certain information was processed and presented in the way it was (D. Stuart 1995). Such detective work will ultimately chart how representations of the past gained credibility, how people connected past and present events, and how the past changed dynamically to accord with present preoccupations (Gell 1992: 267). Some of these structures spring from traditional modes of narratives (Vansina 1985: 74–75), some from indigenous theories of history (Bricker 1981a: 181). Others exist because of political decisions. Michael Thompson suggests that history consists of a “form of knowledge . . . shaped by the

social forces that influence acceptance and rejection" of information (Thompson 1979: 64). A side issue is determining whether certain historical beliefs "permeate . . . a community" and lie "beyond direct argument" (what John and Jean Comaroff call "hegemony") or whether they consist of assertions linked to "a particular social group" that remain "open to contestation" (what the Comaroffs describe as "ideology"; Comaroff and Comaroff 1992: 29).

None of these approaches is satisfactory in itself. The literalist extreme, the "good-faith" premise about Classic historical records, demands something few scholars are willing to give. Our personal belief is that hieroglyphs recording contemporary or near-contemporary events are somewhat unlikely to contain blatant falsehoods: that this king was ruling when he was not, that this burial took place when it did not. We believe, following Henry Nicholson's lead, that such accounts—we emphasize again, those that are contemporary or near-contemporary—do not so much fabricate events or people as omit inconveniences. One of us (D. Stuart 1995) has questioned the perception that Maya texts largely record interdynastic interaction or genealogical information, presumably a savory temptation to the ancient propagandist. Such interactions have interested scholars for the last thirty years, genealogies for the last fifteen or so. But, in fact, the largest number of texts emphasize esoteric ritual matters, including the emplacement of sculpture, as at Copan, or the celebration of calendrical events. Aside from shifts of a few days, there would seem to be little compelling need to lie or to mislead grossly about such matters. Yet these endorsements are not the same as yielding to the "good-faith" premise. Articles of faith do not make good academic arguments, since they lie beyond dispute or disproof.

The historiographical premise, plausible and attractive at first sight, has its own problems. As recently as 1985, Jan Vansina felt that the principal objective in studies of oral tradition should be the reconstruction of "reliable" history from accounts that may involve less-than-"faithful transmission" (Vansina 1985: 129, 199–200). More than Vansina acknowledges, the concepts of "reliability" and "faithfulness" involve questionable assumptions about the historical enterprise. According to Peter Novick, in striving to distinguish the "real" and "truthful past" from fictional embellishments, "objective" historians labor not so much under a noble premise as under "a sprawling collection of assumptions, attitudes, aspirations, and antipathies" (Novick 1988: 1). The "structuralist" premise that focuses on the internal value of written documents has its own limitations, to be sure. In its most radical form, it takes off in metaphysical directions about subjectivity, selfhood, and being that anthropologists or Mayanists are ill-equipped to explore (Gell 1992: 13–14). Even its diluted form leads us to matters of great interest, but not to ones that require our exclusive attention. We assert that real people lived and did things in the Classic period, that historiographical methods continue to be useful in finding out what happened among the Classic Maya elite. Comparisons of records from competing sites in the Classic Maya world point to larger patterns of antagonism, alliance, and regional perspective. Glyphs treated as isolated texts float free of the societies that made them, the economy that allowed their production, the archaeological contexts in which they were found, and the people that commissioned, carved, or painted hieroglyphic statements. It seems inescapable that the best approach to Classic Maya history is one that looks at this history from several vantage points, both for historical reconstruction,

the “retelling,” and for examining the ways in which the ancient Maya organized this information. Our suspicion is that the latter will prove easier to accomplish than the former. Structures may be easily accessible in texts, but chronicles will continue to elude checks for accuracy. Moreover, a concern with category and phrasing of event compels a reorientation away from—or in addition to—a preoccupation with truth or reliability. Michel de Montaigne said in one of his essays that the opposite of truth is an infinity of lies (Bok 1989: 3). We think the reverse is the case: historical “truth,” especially as conceived in narrative form, can have a near-infinity of meanings depending on participant, spectator, interpreter, and theoretical bias. Our very difficult business is to sort through this shifting puzzle and to seek an approximation of the past that incorporates as much information as possible.

THE ORGANIZATION OF THIS BOOK

Within this intellectual context, the sources presented herein will perhaps have more meaning and significance. But how were the pieces themselves chosen from the multitude of articles and essays on Maya glyphs? Several questions had to be asked to determine the selection of writings for inclusion: Is the article or book excerpt important? Is it hard to find or, because of its language, difficult for some readers to access? More crassly, is it expensive to reproduce in terms of legal permissions and copyright clearance (as was true of a number of selections we had wanted to include)? Given limitations of space, does it deserve republication more than another article? Which works are important to students, which to professionals? Is the piece unfairly neglected? Where possible, we have weighed these considerations, probably not to everyone’s satisfaction. For example, we decided not to include the superb, but recently reissued, articles in *Phoneticism in Maya Hieroglyphic Writing* (Justeson and Campbell 1994). No sourcebook can go without contributions from Berlin, Lounsbury, Proskouriakoff, and Thompson. Nonetheless, because of its relatively easy access, we exclude Lounsbury’s seminal article “On the Derivation and Reading of the ‘Ben-Ich’ Prefix” (1973); the released space allows us to include some of Berlin’s articles, translated from the original Spanish, and Grube’s article on the erection of stelae, hitherto available only in German (students of Maya glyphs should be polyglot, but relatively few are). These translations, checked closely for accuracy and clarity, provide ready access to neglected sources. To our knowledge, no one has ever compiled the earliest eyewitness descriptions of Maya writing. These appear here, along with the extraordinary, prophetic remarks of Jean Genet, whose suicide deprived Maya epigraphy of an independent and fertile mind. We have also deliberately avoided any claim to complete currency of publication: with a few exceptions, our cut-off date was 1985. More recent findings will be discussed in the companion volume, *Ancient Maya Writing*, where such discoveries can be brought up to the present.

We have organized articles and excerpts according to seven themes: (1) “Discovery”; (2) “The Nature of Maya Writing”; (3) “Principles of Decipherment”; (4) “Time”; (5) “History”; (6) “Supernaturals”; and (7) “Objects.” The section on “Discovery” reproduces the reports of eyewitnesses. It also includes a number of scholars that we place in later phases of research. Thereafter come the thematic sections, each organized

chronologically. "The Nature of Maya Writing" reports on speculations about the structure and content of the script. The following section, "Principles of Decipherment," narrowly addresses approaches to decipherment, the suite of methods and concepts used to infer sound and meaning. "Time" includes a selection of publications on mathematics, calendrics, and astronomy. We have kept this brief because the topic is ably handled in many other publications, particularly J. E. S. Thompson's inimitable *Maya Hieroglyphic Writing* (1950). "History" contains several contributions to the subject of dynastic history; "Supernaturals" addresses nonhistorical figures in Maya texts; and "Objects" offers a collection of papers on a highly topical aspect of recent glyph research.

We apologize in advance if our list of contributions worthy of inclusion in this sourcebook falls short of others' expectations. Whatever its imperfections, this compilation does, we hope, express our gratitude for the worthy example of our forebears who made possible the decipherment of the rich and elegant Maya script.

NOTES

1. It should be noted that the title given for the published version of Stuart's paper contains a misleading editorial mistake. The intended title was "Quest for Decipherment: A Bibliographical Survey."

2. A few reviewers, particularly those protective of Thompson's well-deserved reputation as a leading Mayanist, respond to Coe's passion with heat of their own (e.g., Hammond 1993: 233–34).

3. As later discussions make clear, Knorosov's early methods pointed toward sound advances in decipherment. More recent works by Knorosov and his students represent a curious break from the breakthrough years of the 1950s and are very far removed from the methods now generally used by scholars in the United States, Latin America, and Western Europe.

4. As Coe has shown (see also discussions below), Berlin's and Proskouriakoff's contributions were anticipated decades before by scholars such as Charles Bowditch (1901) and Jean Genet (1934). These works, however, received little attention in a small field and were never pursued to the extent they deserved.

5. John Justeson objects to the "Yale" label as a "poor tag" that fails to reflect the actual location of participating scholars. Nonetheless, Justeson himself went on a postdoctoral fellowship to Yale, Linda Schele spent a year at Yale, and Peter Mathews took his Ph.D. degree there, doing his course work in the mid-1970s. We continue to believe that this tag is as good as any other.

6. It is important to avoid confusion here. Debates about "realism" do not directly concern the contention by some archaeologists that glyphic history, as extracted from texts of the Classic period, is hopelessly "unreliable," "tendentious," or "propagandistic." "Realism" vs. "antirealism" involves scholarly predisposition rather than some intrinsic quality of evidence—what occurs in the mind of the interpreter, not that of the ancient scribe. Typically, in Maya studies, those who vouch for glyphic sources and those who belittle them are both "realists." The former assert that ancient history is reliably accessible through glyphs; the latter that such "truth" exists, but can only be apprehended through the rigorous methods and materialistic focus of archaeology. As we suggest below, neither approach pays sufficient attention to the role of the modern interpreter.

7. Morley's most concise statement on decipherment can be found in his contribution on "Maya Epigraphy" to the Tozzer Festschrift. It is not altogether a clear declaration. He acknowledges that two-thirds of the glyphs remain undeciphered, yet also says, "[W]e can conservatively claim they [the glyphs] no longer conceal from us the general tenor of their meaning as being chronological, astronomical and religious records" (Morley 1940: 147), with "an extremely limited subject matter . . . [that is] . . . essentially homogeneous" (Morley 1940: 149). That is, negative evidence is being used to make positive claims. Morley continues: by "their very nature" the noncalendrical glyphs will be "less susceptible of conclusive proof" (Morley 1940: 148). Then comes the argument that, because glyphs are "*always the same*," regardless of site, they "*all tell the same story*," a confusion by Morley of glyphic form with semantic content (Morley 1940: 149; emphasis in original). One of the reviewers of this volume (Justeson) feels that this appraisal is unwarranted and that selective illustration reveals only Morley's near-exclusive concern with chronology. This is precisely our point.

8. The assertion that archaeological results go from earth to publication without a detour through someone's mind is both audacious and incredible. Nonetheless, its refutation is best left for another forum.

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Part One

Discovery

Compared to other ancient scripts, Maya writing was forgotten for a relatively short time. The script was in use when the Spaniards came to Yucatan, but it took only a few decades before the last literate survivors from the pre-Conquest period had passed away in the northern part of the peninsula. Nonetheless, elsewhere in the Maya region, particularly in the Itza kingdom around Lake Peten, Maya peoples continued to write in hieroglyphs until the end of the seventeenth century. The first attempts by outsiders to understand the system were made only about a century and a half later, by which time little knowledge of the script remained.

Early Colonial writers noted the existence of books and a writing system, but the testimonies they left are, with few exceptions, lamentably short, vague, and misleading. Yet they do provide a wealth of information that merits close attention. While not exhaustive, the paragraphs here cover the majority of Colonial writings on the subject. We have avoided sources dealing with highland Guatemala and other parts of Mesoamerica, which might refer to other, nonlogosyllabic forms of writing (pace Tedlock 1992; see Houston and Stuart 1992: 591). Perhaps the best evaluation of Colonial texts on Maya writing can be found in the first chapter of J. Eric S. Thompson's commentary on the Dresden Codex (1972a: 3–14).

For early Colonial writers in Yucatan, there was no question about the identity and language of the creators of the script.⁴ However, only a few years after Andrés de Avendaño y Loyola described the Maya books at Tayasal, the Isagoge histórico-apologética offered a hint of what was to become a basic problem for nineteenth-century authors. With time and population loss, scholars would disassociate the ancient remains of the Classic Maya from the contemporary Maya, particularly in the southern Lowlands. Antiquarians devised imaginative explanations for the existence of cities and monuments, often phrasing their discussions in terms of ancient migrations from the Old World. The author of the Isagoge was probably the first to seek an understanding of the inscriptions through structural analysis alone, without relating the texts to the modern inhabitants or languages of the area.

By the last quarter of the eighteenth century, exploration of Maya sites had begun in earnest under the auspices of the Spanish crown, with the ruins of Palenque as their main focus. José de Estachería, Colonial governor of Guatemala between 1784 and 1789, provided the impetus for two formal research expeditions to Palenque, both of which produced reports and drawings of the buildings, sculptures, and hieroglyphs at the site. The results of the first expedition, undertaken by

architect Antonio Bernasconi in 1784, would not be printed until the twentieth century (Angulo Iníguez 1933–39; Castañeda Paganini 1946). Through unknown circumstances the results of the second expedition, directed by Captain Antonio Del Río in 1786, were to be translated into English and published in London in 1822, together with drawings of the reliefs and buildings made by artist Ignacio Armendáriz (Del Río and Cabrera 1822; H. Berlin 1970a). Earlier, Alexander von Humboldt had published one of Armendáriz's drawings of Palenque, as well as five pages of the Dresden Codex (Humboldt 1810), but at that point he did not recognize their true cultural affiliation. Del Río's book was the first to call international attention to the ancient remains in the jungles of Central America. Del Río and others soon recognized that the hieroglyphs in some of Armendáriz's drawings represented writing. Although inaccurate by modern standards, these drawings supplied the basis for the early, and partly successful, interpretations of Constantine Rafinesque and James H. McCulloh, both much-neglected by Mesoamericanist scholarship (G. Stuart 1989), particularly in relation to later North American involvement in Maya archaeology.

The aesthetic appeal of Maya art to Westerners, along with the existence of a well-developed writing system, influenced discussions about the degree of civilization among peoples of the New World, a debate that troubled both sides of the Atlantic from the eighteenth century on (Gerbi 1973). This dispute often carried political connotations. In the emerging states of Central and South America, early nationalists used such evidence to support their aspirations to independence and equal standing with the nations of Europe. This also held true in the United States, where a quest for national reaffirmation involved early attention to ancient Maya art as well as to the "Mound builder" cultures of North America. These nationalist intellectual movements rejected claims of Old World origins for New World cultures, a position that found full expression in the writings of John L. Stephens (see Ortega y Medina 1953, 1990).

Rafinesque and McCulloh had scant and ill-copied glyphic material at their disposal. Later scholars benefited from the independence of the Spanish colonies and the expansion of the world capitalist economy, which led to more direct contact with Europe and the possibility of more open travel. Soon hieroglyphic material became available through a variety of publications, many of them investigative reports: Captain Guillermo Dupaix (1834), who visited Palenque and Tonina in 1809–10 under the sponsorship of the Spanish crown, published a profusely illustrated account of his explorations; Juan Galindo eventually reported on his travels to Palenque and Copan, the latter under commission from the government of Guatemala (Galindo 1831, 1835); Jean-Frédéric Waldeck offered his flamboyant account of Mexican travels in 1838. The most extravagant publication by far was Lord Edward Kingsborough's (1830) reproduction of the Dresden Codex. By mid-century, Stephens's narrative description of his travels together with Catherwood's illustrations provided an extensive corpus of drawings with the accuracy necessary for serious interpretation (Stephens 1841, 1843).

Systematic attempts to interpret the inscriptions did not occur, however, until the discovery of what appeared to be a bilingual (or, more correctly, bigraphic) "key": Diego de Landa's "ABC" (abecedario). Stimulated by this discovery, enthusiasts dedicated themselves to elucidating the "key" in the last quarter of the nineteenth century. Since the writings of several of these authors appear elsewhere in this book, we have chosen to include here three contributions that are seldom read today: the early musings of Brasseur de Bourbourg, the noteworthy effort of another French pioneer, Léon de Rosny, and the ideas of Daniel G. Brinton, all of which provide some notion of state-of-the-art epigraphy at the turn of the century.

NOTE

1. It would be misleading to say that Colonial authors writing outside Yucatan specifically described the *Lowland Maya* logosyllabic writing system. Some authors, however, including E. Thompson (1972a), have included Colonial descriptions of pre-Hispanic books from the Guatemala highlands in their discussions of Colonial sources on Maya writing.

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De Orbe Novo Decades, Fourth Decade

Peter Martyr d'Anghiera

Maya codices were included among the treasures sent by Hernán Cortés to Charles V in 1519 from the recently established town of Villa Rica de la Vera Cruz. Like other items in the treasury, these books excited the curiosity of European observers, who produced several descriptions of them (M. Coe 1989). The best comes from the pen of Peter Martyr d'Anghiera, a celebrated humanist in the service of the Spanish crown.

Peter Martyr was born in Arona, Milan, sometime between 1456 and 1457. Although his family appears to have been somewhat impoverished, he prized his noble descent, which allowed him to gain noble patronage and education. Living in Rome between 1477 and 1487, Martyr became a member of the highest intellectual circles, acquired an extensive knowledge in the classics, and started his literary ventures. In 1487, he left Italy for Spain, attracted by the growing fame of the Catholic kings and with the desire to participate in their struggle against the Moors. He became a member of the Spanish court and several years later entered the priesthood, apparently to engage more closely in the intellectual debates of the country. At court, he served as a preceptor for noble children and was also entrusted with diplomatic missions to Bohemia and Egypt. Martyr witnessed and participated in the important events that accompanied the rise of the Spanish monarchy, and his correspondence (Anglería 1953–57) is an important source on the politics of his time. In 1518, he was appointed to the Royal Council of the Indies, where he was named “royal senator for the Indian matters” in 1519 and royal chronicler in 1520 (Kubler 1991: 43). Among several ecclesiastical benefits, he was given the office of abbot of Jamaica in 1524, a title he held for only two years, before dying in Granada in 1526.

The discoveries of the Spaniards in the New World aroused enormous interest in Peter Martyr. *De Orbe Novo Decades*, his main work on the subject, consists of eight Latin letters written between 1493 and 1525, describing the Spanish ventures, which he knew from the reports of the conquerors and from personally interviewing voyagers to the New World. The letters contain valuable information on New World populations, being one of the earliest written sources on the subject.

The Fourth Decade is addressed to Pope Leo X. The clarity and detail of his description have allowed modern students to argue that the books so described are Mayan rather than

Mexican (E. Thompson 1972a: 3–4; M. Coe 1989). Clues for that assertion come from his description of the material and form of the books, as well as the arrangement of script and figures. Most likely, the volumes were collected during the earliest Spanish visits to the Yucatan coast.

We have said that these people have books, and they brought many, together with the other gifts, these new colonists of Coluacán and the procurators and messengers. What they write upon are some sheets of a certain thin inner tree bark that grows underneath the outer bark; according to what we see, not in the willow or elm tree, but in the little palms that are eaten, there is a hard cloth that separates the outer layers, like nets with holes and narrow mesh, and they besmear them with a strong pitch. When they are soft, they give them the form that they desire and spread it out at their discretion, and after it has hardened they cover it, one supposes with plaster or with some similar material. It is believed that Your Holiness will have seen little tablets with a layer of plaster sifted like flour, on which can be written whatever is wished, and then they erase it with a sponge or rag to write again. From little tablets of fig wood are made the books that the administrators of the great houses carry with them to the markets, and with a metal bodkin they jot down what they buy, to erase it when they have transferred it to their account books.

Not only do they bind the books, but they also stretch out this material many cubits, and reduce it to square sections, not loose, but so united with a resistant and flexible pitch that, in comparison with wooden tablets, it seems they have left the hands of a skillful bookbinder. From wherever one looks at an open book, two written faces are displayed; two pages appear, and under these are hidden another two if it is not stretched out at length, since underneath one folio are many other joined folios.

The characters are very different from ours: dice, hooks, loops, strips, and other figures, written in a line as we do; they greatly resemble Egyptian forms. Between the lines are marked out figures of men and animals, principally of kings and magnates, by which one can believe that there are there written the deeds of each king's ancestors, as we see is done in our own time, that often in general histories and in fabulous codices the printers insert figures of those who did what is being recounted, to stimulate those who might want to buy them.

Also, the upper tablets are agreeably arranged with wood; when these books are closed, it appears that they are no different from ours. Also, it is believed that they write in their books the laws, sacrifices, ceremonies, rites, astronomical annotations, and certain computations, and manners and times of planting.

“Meditación sobre las Indias”

Tomás López Medel

One of the earliest, yet obscure references to Maya writing is contained in López Medel's "Meditation on the Indies," a section of his larger Tratado cuyo título es "De los tres elementos, aire, agua y tierra," en que se trata de las cosas que en cada uno de ellos, acerca de las Occidentales Indias, naturaleza engendra y produce comunes con las de acá, y particularmente de aquel Nuevo Mundo. Written in Spain sometime around 1565 (Pereña 1990: 7), this "Meditation" came from an experienced bureaucrat who had served the Spanish crown as oidor in Mexico, Guatemala, and New Granada (modern Colombia). Born in Spain in 1509, he studied law at the universities of Alcalá de Henares, Paris, and Bologne. In 1548, he was appointed an oidor of the Guatemalan audiencia. In this position, he visited Yucatan in 1552–53 and contributed significantly to shaping the Colonial society of that province by issuing a series of well-known ordenanzas (see Clendinnen 1987: 57–60). Transferred to the audiencia of Bogotá in 1556, he lived there until 1560, returning to Spain thereafter. He went back to the University of Alcalá to pursue studies of philosophy and theology, while serving as a consultant on matters related to the Indies. His appointment as bishop of Guatemala in 1570 did not succeed, because he conditioned his acceptance on the implementation of his program for the government of the colonies.

López Medel's "Meditation" was the culmination of a series of writings in which he openly criticized Colonial society and proposed ways to reform it. Particularly interesting is the concluding chapter, which contains a debate between the Old and the New World, on the benefits and damages each has received from the other. As discussed by Robert Carmack (1973: 111), his attitude toward the Indians was often patronizing, but at the same time he attributed a moral superiority to their supposedly simple ways. This is well illustrated by his discussion of writing, which starts by discussing Peruvian quipus and Mexican pictorial manuscripts. He ends with an admiring observation: "what is marvelous about this is that the ones with their knots and the others with their paintings and figures had as good accounts as us with our writings, even though they were very old" (López Medel 1990: 314).

Almost as a parenthetical comment, he added some remarks on Yucatec writing, followed by a lengthy discourse on the vanity and excess of European ways and goods. Particularly noteworthy is his conclusive statement on the limitation of literacy to priests and some lords. Equally interesting

Written ca. 1565 by Tomás López Medel (1509–82). Excerpted from López Medel 1990: 314–15.

is his assertion that many codices were burned by the earliest preachers. Since his visit took place ten years before the 1562 auto-da-fé of Mani, this statement calls into question Diego de Landa's responsibility for burning a majority of pre-Hispanic Yucatec manuscripts during that famous inquisitorial procedure. Clearly, many missionaries destroyed Indian manuscripts in Yucatan and elsewhere.

López Medel's work remained unpublished until the recent edition by Luciano Pereña and his colleagues (López Medel 1990: 299–374). The following excerpt is translated from their edition and includes their identification of the biblical citation. A section of this text was included as an appendix to Alfred Tozzer's edition of Landa (1941: 221–29).

And these are the letters that were found there, although in the province of Yucatan I remember that they showed me a certain manner of letters and characters that the natives of that province used that were like some laces and Moorish labors, and with them they wrote their businesses and tales. The paper they used was from the barks of certain trees, from which they obtained long strips about two *varas* long and up to a hand span wide and thin like baqueta leather, and they folded it like the wide *lechuguilla* [a kind of wide neck or cuff] of a shirt. And this manner of letters and writing was not understood unless learned, and it was known only by the priests and some caciques. A large number of this manner of books or notebooks were found by the conquerors when they entered that province; and certain priests that entered to preach the holy gospel when that province had just been conquered burned all or most, *existimantes se prestare obsequium Deo*.¹

NOTE

1. John 16:2.

Relación de las cosas de Yucatán

Diego de Landa

Many extraordinary individuals stand out amid the turmoil of Spanish expansion in the New World. Diego de Landa is one of them. Born in 1524 in Cifuentes de la Alcarria, Toledo, Spain, he arrived in Yucatan as a young Franciscan friar in 1549 and rapidly distinguished himself as one of the most dedicated among the early missionaries. He became proficient in Yucatec Maya, reportedly improving the Maya grammar written earlier by Luis de Villalpando and also translating religious materials; nothing survives of these works. By 1552, he was in charge of the convent of the important town of Izamal; and by 1561, he held the highest position available at the time in the religious hierarchy of Yucatan, as provincial or head of the Franciscan province.

It was then that he instituted an inquisitorial procedure against the Indians of Mani and other provinces, indicting them on charges of idolatry. This inquisition was characterized by acute harshness and provoked a major disruption in the young colony. This led to Landa's abandonment of the country after conflicts not only with the Indians, but with the local Spaniards and with the newly appointed first bishop, Francisco Toral. Back in Spain, Landa successfully defended himself against charges of cruelty and judicial errors and returned to Yucatan as bishop in 1572, after Toral's death, holding this office for only seven years before his own demise in 1579.

The Relación de las cosas de Yucatán was written in Spain, probably in 1566. Far from being a bitter accusation against the idolatry of the Yucatecs—as might be expected from the author's deeds—the book consists of sensitive recollections about the people and natural landscapes of the peninsula, by one who had observed them closely (see Clendinnen 1987). The passages on Maya writing illuminate the author's own inner conflicts. Like many other missionaries in New Spain, Landa believed that Native American books were tainted by superstition, and he readily tells how they were burned. In the next paragraphs, however, he provides the fullest remaining description of the writing system, complete with his "ABC." It is evident that he had taken an interest in learning the script; and although he did not succeed in understanding it, he considered it important enough to document to the best of his ability.

Landa's Relación survives only by way of an abridged copy made in the seventeenth century that is now preserved at the Royal Academy of History in Madrid. The importance of the document for the study of Maya writing needs little comment; the articles in part two provide a panorama of

the controversies that have raged about the value of the document since its discovery in the nineteenth century. We have included here most of the paragraphs in the Relación that refer to the writing system, as well as selected parts on counting and the calendar. For the sake of brevity, the lengthy portion that explains the year cycle and its associated feasts, together with the very important signs for the months, has not been included.

[p. 15]

They [the priests] taught the sons of other priests, and the second sons of the lords, who took them for this purpose from childhood, if they noticed they had an inclination for this profession.

The knowledge [*ciencias*] they taught was the count of the years, months, and days, the feasts and ceremonies, the administration of their sacraments, the fateful days and times, their ways of divination, remedies for illness, antiquities, [and] to read and write with their letters and characters, in which they wrote with figures that represented writing.

They wrote their books in a long sheet, doubled with folds, which was enclosed entirely within two boards that were made very well, and they wrote on one side and the other in columns, following the folds; and they made this paper from the roots of a tree, and they gave it a white gloss on which they could write well, and some principal lords knew about this knowledge [*ciencias*] from curiosity, and for this they were better esteemed, although they did not use it in public.

[p. 41]

Their counting is by fives up to 20, and by twenties up to 100, and by hundreds up to 400, and by four hundreds up to 8,000, and they used this counting very much for the commerce of cacao. They have other, very long counts, which they extend *ad infinitum*, counting 20 times 8 thousand, which gives 160 thousand, and duplicating it afterward in this way until they make an uncountable number. They count on the ground or on something smooth.

[pp. 61–62]

They had their year, perfect as ours, of 366 days and 6 hours. They divided it into two kinds of months, the first kind of 30 days, called *U*, which means *moon*, which they counted from the time it appeared until it no longer appeared.

They had another kind of months of 20 days, which they call *Uinal Hunekeh*; of these the whole year had 18, plus five days and six hours. From these six hours a day was made every four years, and so they had every four years a year of 366 days. For these 360 days they have 20 letters or characters with which they name them, omitting to give a name to the other five, because they considered them unfortunate and bad. The letters are as follows and each one has its name underneath, so that it may be understood in our language.

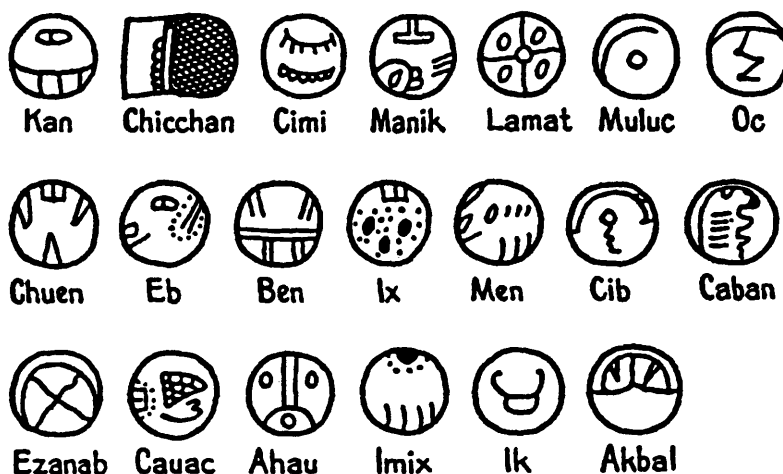


Figure 3.1. Names for the twenty days of the month

I have already said that the way of counting of the Indians is by fives, and from four fives they make twenty. Thus, from these characters, which are twenty, they take the first of the four fives of the twenty, and these serve, each one of them, for the same purpose as our dominical letters serve us, to begin all the first days of the months of twenty days.

[p. 70]

With the above-mentioned letters of the Indians, they gave names to the days of their months, and with all months together they made a sort of calendar, with which they ruled themselves, not only for their feasts, but also for their accounts, commerce, and businesses, as we rule ourselves with ours, except that they did not begin their calendar on the first day of their year, but much later. They did so because of the difficulty with which they counted the days of the months, all together, as will be seen in the calendar itself, which I will write here; because although the letters and days for their months are twenty, they have the habit of counting them from one to thirteen. They start again from one after the thirteen, and so they distribute the days of the year into twenty-seven thirteens plus eleven days, not counting the unfortunate days.

With all these jumbles and burdensome counting, the facility with which those who know it count and understand each other is something to be wondered at, and it is very notable that the dominical letter always falls on the first day of their year, without erring or missing, nor falling there on any other of the twenty.

[pp. 103–4]

Not only did these Indians keep count of the year and the months, as said and pointed out before, but they also had a certain way of counting times and their matters

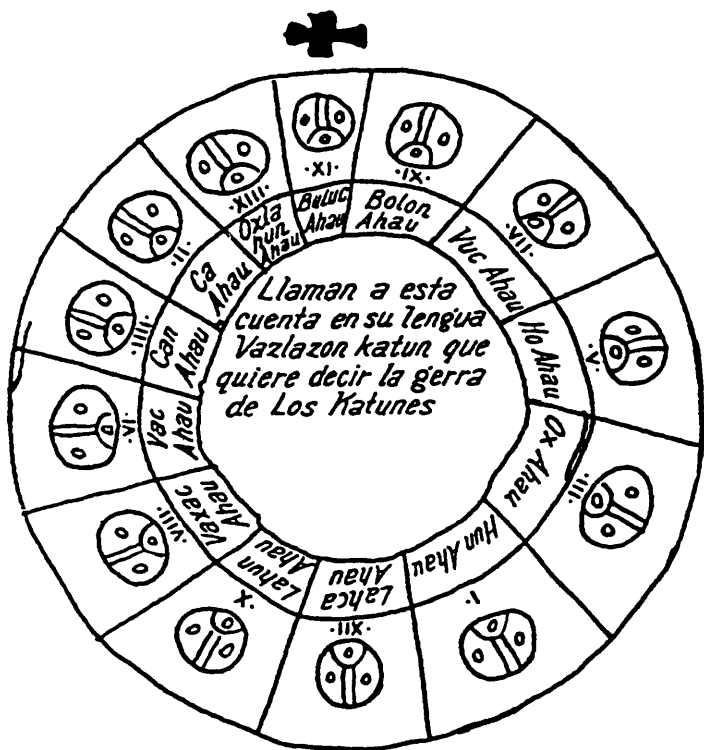


Figure 3.2. The katun wheel

by ages, which they made every twenty years, counting thirteen twenties with one of the twenty letters of the days they call *Ahau*, without order but jumbled as they appear in the following circle:

They call these in their language *Katunes*, and with them they kept, marvelously, account of their ages, and so it was easy for the old man I talked about in the first chapter, three hundred years later, to remember them. And if I did not know of these counts of them, I would not believe he could remember so long a time.

[pp. 104–6]

These people also used certain characters or letters with which they wrote in their books ancient matters and their sciences, and with these figures and with some signs of them, they understood their matters and made them understood and taught them. We found a great number of books of these letters, and because they contained no matter in which there were no superstitions and falsities of the devil, we burned them all, which they regretted amazingly, and it caused them much sorrow.

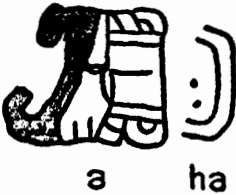
Of their letters I will write here an ABC, since its ponderousness allows nothing more, because they use a sign for all aspirations of the letters, and afterward, they join

to it a part of another, and so they come to be *in infinitum*, as will be seen in the following example. *Le* means *noose and to hunt with it*; in order to write *le* with their characters, we having made them understand that there were two letters, they wrote it with three, adding to the aspiration of *l* the vowel *e*, which it carries before it, and in this they do not err even if they use [another] *e*, if they wish, for curiosity. For example:



Afterward, at the end, they add the joint part.

Ha, which means *water*, because the *h* has *a* before it, they put it at the beginning with *a*, and at the end in this manner:



They also write it in parts, but in one and the other way, which I would not write here except to give a complete account of the affairs of this people: *Ma in Kati* means *I don't want*, and they write it in parts in this way:



Here follows their ABC:

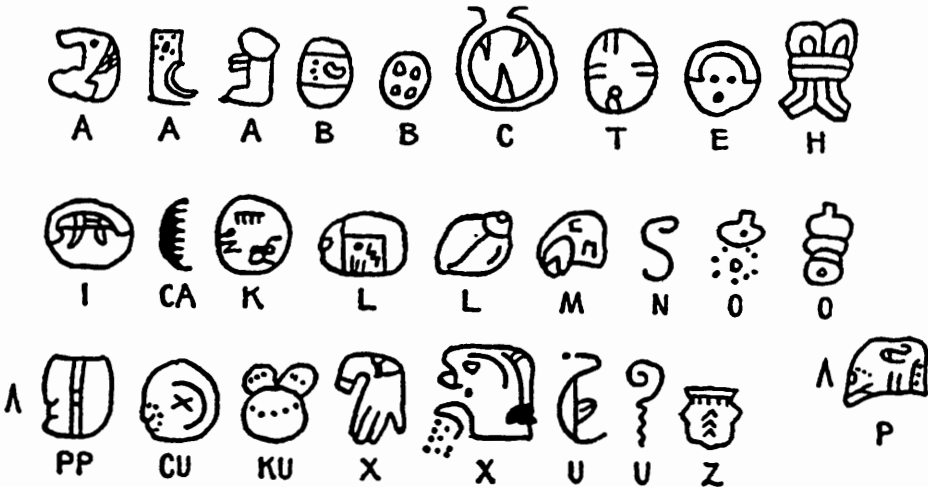


Figure 3.3. The Maya alphabet

This language lacks the letters that are missing, and it has others added to our own¹ for other things of which it has need, and they no longer use these characters, especially the young people that have learned ours.

NOTE

1. *añadidas de la nuestra*: This phrase has usually been translated as “added from ours.” Translating it as “added to our own” is contextually more adequate, since the phrase intends to convey the idea that the Maya script (as represented in Landa’s alphabet) had “letters” that were not represented in the Spanish alphabet. [Editors’ note]

Relaciones geográficas de Yucatán

Various authors, including Gaspar Antonio Chi

Brief but significant statements on the nature, content, and uses of Maya writing appear in some of the Relaciones geográficas de Yucatán. These documents were composed as responses to a questionnaire issued in 1577 by the Spanish crown, covering a wide range of topics related to the geography, resources, history, and inhabitants of each province in its New World territories. The questionnaire was prepared by the chronicler-cosmographer of the Council of the Indies, Juan López de Velasco, following earlier attempts by his superior, Juan de Ovando, to gather a corpus of basic information on the colonies. Although the response from Colonial officials was far from complete, it produced a vast amount of information, which, judged by modern standards, amounts to a systematic geographic and ethnographic survey of a large sector of the New World (Cline 1972).

When compared with those of other regions, the Yucatec Relaciones display a number of peculiarities. Unlike the Relaciones of other parts of New Spain, they were not written by royal officials, but mainly by encomenderos, a fact that explains the existence of joint Relaciones for towns that were geographically separated. They tend to be short and repetitive, many of them having been copied to a large extent from the Relaciones of the main towns of Mérida and Valladolid (Garza and Izquierdo 1983: xxvii, xxx).

The first four Relaciones excerpted below come from the province of Mérida (Maya Tiho'), while the other two are from towns within the province of Valladolid (Maya Saki'). Significantly, the Mérida Relaciones were composed with the aid of Indian informants, chosen from among the caciques and principales of the towns. The most important of these was Gaspar Antonio Chi (ca. 1531–1610), a man of noble birth who was noted for his education and his knowledge of the Spanish, Latin, and Mexican languages, in addition to his native Maya. He worked closely with Spanish secular and religious authorities, serving as interpreter and lawyer in Indian matters (Blom 1928; Tozzer 1941; Strecker and Artieda 1978; Garza and Izquierdo 1983). Because of his knowledge of indigenous culture, Chi was assigned by the town council of Mérida to assist the encomenderos in answering the questionnaire of 1577.

Written in 1579–82 by various authors, including Gaspar Antonio Chi (ca. 1531–1610). Excerpted and translated from Garza et al. 1983 and Strecker and Artieda 1978, as noted in the text.

In 1582, Gaspar Antonio Chi himself wrote, under commission from Governor Guillen de las Casas, a Relación on the customs of Indians (López de Cogolludo 1957: 182). Unfortunately, the manuscript has been preserved only in fragmentary form at the Archivo General de Indias in Seville (AGI Mexico 110, 58-6-24). Diego López de Cogolludo, a seventeenth-century historian and member of the local Franciscan province, owned a copy of this manuscript, which he excerpted freely in his Historia de Yucatán, first published in 1688 (book 4, chapters 3 and 4). With the aid of Cogolludo's excerpt, Ralph Roys attempted a complete reconstruction of Chi's Relación (published in Tozzer 1941: 230-32), while J. E. S. Thompson (1972a: 6) has offered his own reconstruction of the passages on hieroglyphic writing. Instead of offering a reconstruction, we prefer to include separate translations of the extant portions of Chi's text and Cogolludo's version. The translation of Chi's text is based on the critical edition made by Matthias Strecker and Jorge Artieda (1978).

RELACIÓN DE LA CIUDAD DE MÉRIDA

By Martín de Palomar, regidor; signed by Palomar and Gaspar Antonio Chi

DATED FEBRUARY 18, 1579

[Excerpted from Garza et al. 1983: 1:73]

They had letters, with which they wrote and communicated [with each other], which were certain characters, each one being a part, and through them they communicated like us with our letters. These were taught only to noble persons, and because of that, all the priests, who were most devoted to these letters, were principal persons.

[Excerpted from Garza et al. 1983: 1:80]

[concerning snakes]

In ancient times, in the time of their gentility, they strove to protect themselves from this poison with spells and sorceries, for there were great sorcerers, and they had their books to conjure and enchant them, and these sorcerers, with words they said, grabbed and took them with their hands, without the snakes doing them any evil.

RELACIÓN DE TABI Y CHUNHUHUB

By Pedro García, encomendero, in consultation with Pedro Maay, Pedro Hix, Marcos Baz, and Baltasar Balam, caciques y principales, and with the aid of Gaspar Antonio Chi

DATED JANUARY 20, 1581

[Excerpted from Garza et al. 1983: 1:164]

They had letters, each letter was a syllable, and they communicated with them, and they had a complete year of three hundred and sixty-five days.

RELACIÓN DE MOTUL

By Martín de Palomar, in the presence of Juan Peche, cacique y gobernador, Juan Qui, Domingo Xul, and Francisco Euan, principales

DATED FEBRUARY 20, 1581

[Excerpted from Garza et al. 1983: 1:270]

[concerning the administration of law]

Inquiries were made clearly with witnesses, although they had letters or characters with which they communicated, but these were not taught but to the lords and priests.

RELACIÓN DE TIAB Y TIEK

By Juan Bote, encomendero, in consultation with Juan Chulin, cacique, and other principales, and with the aid of Gaspar Antonio Chi

DATED FEBRUARY 20, 1581

[Excerpted from Garza et al. 1983: 1:318–19]

. . . they say the first of them [the lords] was called Hunuikil Chac, lord of Uxmal, a very ancient town and very distinguished for its buildings, born in Mexico, and from there he entered all other provinces, and as his greatness and notable deed it is said about him that he was very learned in natural things, and in his time he taught how to cultivate the lands, [and] he distributed the months of the year and taught the letters they used in the said province of Many [Mani] when the conquerors entered the land . . .

[Similar statements on the origins of writing and the calendar are found in the *Relación de Cansahcab*, *Relación de Dzan*, *Panabchen y Muna*, *Relación de Dzidzantun*, and *Relación de Tekal*.]

RELACIÓN DE LA VILLA DE VALLADOLID

By Blas Gonzáles, Alonso de Villanueva, and Juan Gutiérrez Picón, conquistadores and neighbors, together with Diego Sarmiento de Figueroa, alcalde mayor, and the members of the town council

DATED APRIL 8, 1579

[Excerpted from Garza et al. 1983: 2:38]

They had the bark of a tree on which they wrote and depicted the days and months with big figures on it, and there they wrote; unfolded, this book would be six *brazas* long and some were bigger and smaller.

RELACIÓN DE DZONOT

By Giraldo Díaz de Alpuche, encomendero

DATED FEBRUARY 18, 1579

[Excerpted from Garza et al. 1983: 2:86]

... and these *Ah Kines* had books with figures, by which they governed themselves and there they had marked the times when they had to plant, sow, and go to hunt and to war, and the priests communicated with each other, and wrote to each other with figures, and they knew what had happened many years before.

RELACIÓN DE ALGUNAS COSTUMBRES

By Gaspar Antonio Chi

DATED MARCH 20, 1582

[Excerpted from Strecker and Artieda 1978: 99]

... natives had letters and wrote and ... with them, they did not have the custom of writing ... , nor missive letters, and for quarrels they us[ed many] attorneys that always assisted ...

... notable things that happened in
 ... of their prophets and the lives and
 ... the lords, and for the people
 ... certain chantings in verse
 ... according to the history they contained
 ... there were no legal documents or letters

[Excerpted from López de Cogolludo 1957: 1:180]

They were not accustomed to write their quarrels, although they had characters with which they communicated (of which many are seen in the ruins of the buildings); they settled them by word, through the mentioned Ministers, and what was decided there remained settled and permanent, without the parts daring to act against it.

Informe contra idolorum cultores del obispado de Yucatán

Pedro Sánchez de Aguilar

Born in Valladolid, Yucatan, in 1555, Pedro Sánchez de Aguilar was the grandson of one of the first Spanish colonists of the province. His mother held an encomienda in the town of Tixualahtun, while two brothers were encomenderos in the towns of Tizimin and Tihosuco. As a child, he received instruction in grammar from Gaspar Antonio Chi (a noted informant of Friar Diego de Landa), and afterward he went to Mexico City, where he attended the Jesuit Colegio de San Ildefonso and the University of Mexico, eventually graduating and becoming a secular priest.

Sánchez de Aguilar served as curate in various towns of Yucatan before becoming curate of the Sagrario in the Cathedral of Mérida and later dean of the same cathedral. In 1602, he was in Spain serving as a representative of the Yucatan diocese, returning the next year to the New World. He traveled again to Spain in 1617, at which time he obtained an appointment as canon in the metropolitan cathedral of La Plata, located in the province of Charcas (modern Bolivia)—a significant promotion in his ecclesiastical career. He served in this post from 1621 until his death in 1648.

The Informe contra idolorum cultores was written in Latin and Spanish in 1613 and published for the first time in Madrid in 1639. The book consists of a prolonged argument in favor of the legal rights of the bishop and priesthood of Yucatan to exert direct authority over the Native Americans in matters of idolatry, including priestly authorization to exercise physical punishment. (At this time such powers rested in the hands of secular colonial authorities, and thus outside the clergy's domain.) To substantiate his legal arguments, Sánchez de Aguilar interspersed among them a number of observations on the customs of the Native Americans. Most of these comments derived from his personal experience as a native Yucatec and curate of various towns.

In his writings, Sánchez de Aguilar exemplified early criollo views. Several passages of his Informe defend the interests of the conquerors and their descendants, especially in regard to their rights to hold encomiendas. He also wrote a memoir on the first conquerors of Valladolid as well as a catechism in the Maya language.

Written in 1613 by Pedro Sánchez de Aguilar (1555–1648). Excerpted and translated from Sánchez de Aguilar 1937: 142–44.

They had books made from barks of trees with a white and perpetual gleam, 10 and 12 varas in length, which were kept by folding them about the size of a hand, and in these they painted with colors the record of their years, wars, pestilences, hurricanes, inundations, hungers, and other events; and from one of these books, which I seized from some Idolaters, I saw and learned, that they called one pestilence Mayacimil, and another Ocna Kuchil, which means sudden deaths and times in which ravens entered the houses to eat the corpses. And the inundation or hurricane they called Hunyecil, flooding of trees. They had notice that the world would terminate, and that there was glory and hell. They counted years by moons of 365 days, as we also do. They counted the solar year by months of twenty days, with six canicular days, corresponding to our months in this order. The 12th of January they called Yaax, the 1st of February Çac, the 12th of February Ceh, the 13th of March Mac, the 2nd of April KanKin, the 22nd of April Muan, the 12th of May Paax, the 1st of June Kayab, the 21st of June CumKu, the 11th of July Vayeab, otherwise called VtuçKin VlobolKin, for six days that were their caniculars, the 17th of July Poop, the 6th of August Cip, the 15th of September Çec, the 25th of October Xul, the 14th of November YaaxKin, the 4th of December Mool, the 23rd of December Cheen. This count of eighteen months and the six canicular days are the same 365 of our solar year: they served for many uses, and particularly to know the seasons in which they had to burn their fields, and wait for the waters, and plant their wheat and corn, and the other legumes that they plant in different times. And just as our farmers watch particular days and say *Octubre echa pan, y cubre*, and other sayings, so precisely these Indians used and still use their sayings in these eighteen months and six canicular days to plant, and to look after their health and to get healed as ourselves in Summer, Summer [*sic*], Autumn, and Winter. And although the first clergymen, saints and truly harvesters of Jesus Christ, attempted to banish this count, thinking it was a gentile superstition, it did not succeed, because most know it through their forebears' tradition. And knowing this, I made great efforts to know the truth, communicating this matter with a great Religious, Apostolic man, called Fray Alonso Solana, and with another not lesser called Fray Gaspar Nagera, great ministers, and preachers of these Indians: whom I followed and still follow in stating that this count is not harmful for these Indians' Christianity, but useful as has been explained, so that they will know the seasons. We, the curates and ministers, would know many other things of their gentility, and through them as similes, or by contradicting them, we would preach to them in their own and natural language. But the first clergymen seized and burned these books inadvertently. They spoke with the demon, whom they called Xibalba, which means he who disappears or vanishes.

Relacion de las dos entradas que hize a la conuersion de los gentiles Itzaex y Cehaches

Andrés de Avendaño y Loyola

In the late seventeenth century, a wave of renewed missionary fervor swept the Spanish New World. As one of the few areas of Middle America that still held unconverted populations, the southern Maya area was a target for Spanish religious zeal and political expansion. During the last decades of that century, a series of missionary and military campaigns, directed from both Guatemala and Yucatan, subdued both the Lacandon and Itza Maya, who until then had succeeded in resisting colonization.

Friar Andrés de Avendaño y Loyola played an important role in the campaign for the conquest of the Itza. Born in Castile, Spain, he joined the Franciscan order and moved to Yucatan at an unknown date. Deeply concerned with the Christianization of the heathens, he undertook two or possibly three entradas into the territory of the Itza and Cehach, in modern-day Peten; these trips preceded the military invasion led by Martín de Ursúa in 1697. Before engaging in such ventures, Avendaño had studied the Maya Katun prophecies in Yucatan, which convinced him that the Itza would soon convert to Christianity. He was sufficiently conversant with the subtleties of Maya cosmology to sit and discuss these matters with the Itza priests themselves—at least some of whom reportedly corroborated his interpretations. Avendaño y Loyola's role in the Christianization of the Itza waned after the military conquest, and little is known of his later life. He remained active in the Franciscan Province of Yucatan, becoming a member of the provincial council in 1705.

In addition to the account of his trips to Peten, he wrote several linguistic works (see Roys 1952), all of them now lost. Unfortunately, the "treatise on these ancient accounts" mentioned in the following excerpt is also missing.

[fol. 29, verso]

At the instant we landed and I saw the said column and mask, I understood what it meant, because I had read it in their ancient papers and seen it in the anahteets they use,

Written in 1696 by Andrés de Avendaño y Loyola (fl. 1705). Excerpted and translated from Ayer Collection MS 1040, Newberry Library, Chicago.

which are certain books made from the barks of trees, polished and covered with white-wash, in which, by means of figures and painted characters, they have prognosticated their future events. From these instruments I knew that there were found in the Peten Ytza the said idol Yax checab; that of cocahmut, that of Ytzimna kaul, which means Horse of the Devil . . .

[fols. 35 recto–35 verso]

. . . coming to where they were, with embraces and caresses, I brought them where they first were, telling them I wanted to speak with them about the ancient way of counting that they use, both of days, months, and years and of ages, and to know which age was current (for them, an age consists of only twenty years), and which prophecy corresponded to such year and age; for all of it is attested from certain books, a hand-span in length, and about five fingers wide, made from the bark of trees, folded to one side and the other in the manner of screens, each leaf with the thickness of the edge of a Mexican *real de ocho* [piece of eight]. These are painted on one side and the other with varieties of figures and characters (which the Mexican Indians also used in their antiquity), which indicate not only the counting of the said days, months, and years, but also the ages, and the prophecies that their idols and fabrications announced to them, or better said, the Devil, through the cult they render him in certain stones; the ages are thirteen in number; each age has its distinctive idol, and its priest, with a different prophecy of happenings; these thirteen ages are divided among thirteen parts, which divide this kingdom of Yucathan, and each age with its idol, priest, and prophecies reigns in one of these thirteen parts of this land, in the way they have it divided; I do not state the names of the idols, priests, and parts of this land, to avoid annoying, and because I have made a treatise on these ancient accounts, in all their differences and explanations, so that they are attested for everyone, and the curious might learn them, since without knowing them, I assure you the Indians can deceive us face to face.

Isagoge histórico-apologética de las Indias Occidentales y especial de la Provincia de San Vicente de Chiapa y Guatemala de la Orden de Predicadores

Anonymous

The anonymous author of the Isagoge was a Dominican friar who lived in Guatemala around the beginning of the eighteenth century. His book, a chronicle of the Dominican province of San Vicente de Chiapa y Guatemala, was probably written in 1711. After languishing in oblivion for more than a century in the library of the Dominican convent of Guatemala City, the book was rediscovered in 1829 after the expulsion of the religious order from the newly independent country. The manuscript is now lost, but a copy was made by Juan Gavarrete in 1875, which has served as a basis for the Madrid (1892) and Guatemala (1935) editions (Vela 1943: 139–43).

The little-known description of the sculptured monuments from the ruined city close to the town of Ocosingo (now known as Tonina) is part of a long section of the Isagoge that discusses the origin of New World indigenous peoples. From his impressions of the attire worn by sculpted figures at Copan and Ocosingo, the author concludes that their makers must have been descendants of ancient Carthaginians and Spaniards, who came to the New World by crossing the Atlantic. This episode occurred even before the continent was populated by the ancestors of modern Indians—whom he believed descended from the lost tribes of Israel—who had come from Asia by traversing straits in the northwestern part of the New World (Isagoge 1935: 37–82).

Although his conclusions were incorrect, the Dominican's methods of observation reveal an inquisitive intellect. Having no written or orally transmitted information as to the nature of the Ocosingo monuments, he tended to regard the sculptures as useful clues to the identity of their creators. Unlike writers working in Yucatan, where there existed widespread knowledge of indigenous culture and its pre-Conquest writing system, the author of the Isagoge had to rely on his own insights for evaluating the more ancient remains of Tonina.

Written in 1711. Excerpted and translated from *Isagoge* 1935.

The Dominican apparently did not visit the site, yet he did have the opportunity to examine some of its altars (described as "coats of arms"), which had been brought to the town of Ocozingo. His keen eye distinguished figures of tied captives sculpted on their surface, which he correctly identified as commemorations of war victories. Furthermore, he shrewdly commented on the nature of the writing system, noting that the degree of elaboration of each glyph block ("casita") suggested that these did not stand for single letters, but for "ciphers or hieroglyphs." Given his line of reasoning about the origin of this ancient people, he follows Friar Jacinto Garrido—a fellow Dominican noted for his erudition—in characterizing the hieroglyphs as Chaldean letters. Garrido worked in the Dominican convent of Guatemala in the seventeenth century (Ximénez 1929–31, 2:332–33). From the Isagoge, we know that he wrote a description of Tonina, but the present whereabouts of this document is unknown.

[p. 73 (section of chapter 10): part of a description of the ruins of Ocozingo (Tonina)]

Among these buildings there are also many coats of arms made of very hard stone, as hard as flint, having about five hand-spans [*cuartas*] in diameter, more or less. Their surface is all very uniform and terse, and all about their circumference there is a fringe close to a *sesura* [unit of measurement?] in width, and in this fringe many characters of various figures and ciphers, which Father Prebendary Friar Jacinto Garrido says are Chaldean letters.

Many of these statues and coats of arms have been taken to the town of Ocozingo, where I have seen them; and noticing the characters that the coats of arms bear as fringes, more than letters they seem to me like ciphers or hieroglyphs, meaning actions and events; because each of these figures is placed in its little house, with its lines distinct from each other, and each house has too much labor to be a single letter; and if that were so, a single word would be written in each of those coats of arms, at most. In one of these coats of arms a man of perfect stature can be seen sculpted in medium relief, feet and hands joined, and tied together with the same rope, so cleverly cramped into the circle of that coat of arms that within the diameter of a vara all the limbs of a man quite tall can be seen in natural size. In this coat of arms it seems they tried to indicate that they had subjected some great prince, or cacique, or some Indian nation, because the man shown tied, nude and with his hair in the manner of the Indians, seems to signify some cacique or Indian nation tied and violently subjected.

“First Letter to Mr. Champollion, on the Graphic Systems of America, and the Glyphs of Otolum or Palenque, in Central America”

Constantine Samuel Rafinesque-Schmaltz

At the beginning of the nineteenth century, the successful decipherment of Egyptian hieroglyphs by Jean-François Champollion and others prompted scholars to focus on other ancient scripts. One of the earliest attempts at decoding the newly published Maya inscriptions was made by Constantine Samuel Rafinesque (or Rafinesque-Schmaltz; Williams 1991: 98), the son of a French merchant, born in Galata, a suburb of Constantinople, on October 22, 1783. After living in France and Italy during his childhood, he spent an initial period of two years in the United States, going back to Italy and Sicily from 1805 to 1815. For the remainder of his life, he was a resident first of Lexington, Kentucky—where he taught at Transylvania University, the first university west of the Alleghenies—and then of Philadelphia, where he died in 1840 (Williams 1991: 98).

An encyclopedic intellectual with an astoundingly large bibliography, Rafinesque contributed to such diverse topics as botany, medicine, astronomy, economy, the Shakers, and ancient history (Boewe 1982; G. Stuart 1989). His attention first turned to the subject of American antiquities in 1819, when he published a note on a mound site in Kentucky. The 1827 contribution that follows was his first on Maya epigraphy; like most of his writings, it was published as a newspaper article. Rafinesque continued writing notes on the subject until the end of his life (1828a, 1828b, 1828c, 1828d, 1832a, 1832b, 1835).

In addition to Rafinesque’s historical importance as a pioneer in the study of Maya writing, his insights included some lasting contributions, most interestingly his elucidation of the bar and dot system of numeration. This was no small accomplishment, considering the limitations of the published hieroglyphic texts available at that time (see G. Stuart 1989). After his death from stomach cancer, his reputation went into serious decline, not least because of several devastating (and partly warranted) critiques by Daniel Garrison Brinton (1885).

Written in 1832 by Constantine Samuel Rafinesque-Schmaltz (1783–1840). Excerpted from Rafinesque 1832a: 4–5.

You have become celebrated by deciphering, at last, the glyphs and characters of the ancient Egyptians, which all your learned predecessors had deemed a riddle, and pronounced impossible to read. You first announced your discovery in a letter. I am going to follow your footsteps on another continent, and a theme equally obscure; to none but yourself can I address with more propriety, letters on a subject so much alike in purpose and importance, and so similar to your own labours.

I shall not enter at present into any very elaborate discussion. I shall merely detail in a concise manner, the object and result of my inquiries, so as to assert my claim to a discovery of some importance in a philological and historical point of view; which was announced as early as 1828 in some journals (3 letters to Mr. McCulloh on the American nations), but not properly illustrated. Their full development would require a volume, like that of yours on the Egyptian antiquities, and may follow this perhaps at some future time.

It may be needful to prefix the following principles as guides to my researches, or results of my inquiries.

1. America has been the land of false systems; all those made in Europe on it are more or less vain and erroneous.
2. The Americans were equal in antiquity, civilization, and sciences to the nations of Africa and Europe; like them the children of the Asiatic nations.
3. It is false that no American nations had systems of writing, glyphs, and letters. Several had various modes of perpetuating ideas.
4. There were several such graphic systems in America to express ideas; all of which find equivalents in the east continent.
5. They may be ranged in twelve series, proceeding from the most simple to the most complex.

1st Series. Pictured symbols or glyphs of the Toltecas, Aztecas, Huaztecas, Skeres, Panos, ettc. Similar to the first symbols of the Chinese, invented by Tien-hoang before the flood, and earliest Egyptian glyphs.

2nd Series. Outlines of figures or abridged symbols and glyphs, expressing words or ideas; used by almost all the nations of North and South America, even the most rude. Similar to the second kind of Egyptian symbols, and the Tortoise letters brought to China by the *Long-ma* (dragon and horse) nation of the barbarous horsemen, under *Sui-gin*.

3rd Series. Quipos or knots on strings used by the Peruvians and several other South American nations. Similar to the third kind of Chinese glyphs introduced under *Yong-ching*, and used also by many nations of Africa.

4th Series. Wampums or strings of shells and beads, used by many nations of North America. Similar to those used by some ancient or rude nations in all the parts of the world, as tokens of ideas.

5th Series. Runic glyphs of marks and notches on twigs or lines, used by several nations of North America. Consimilar to the runic glyphs of the Celtic and Teutonic nations.

6th Series. Runic marks and dots or graphic symbols, not on strings nor lines, but in rows; expressing words or ideas; used by the ancient nations of North America and Mexico, the Talegas, Aztecas, Natchez, Powhatans, Tuscaroras, &c. and also the Muhizcas of South America. Similar to the ancient symbols of the Etruscans, Egyptians, Celts, &c. and the *Ho-tu* of the Chinese, invented by *Tsang-hie*; called also the *Ko-teu-chu* letters, which were in use in China till 827 before our era.

7th Series. Alphabetical symbols, expressing syllables or sounds; not words, but grouped; and the groups disposed in rows; such is the graphic system of the monuments of Otolum, near Palenque, the American Thebes. Consimilar to the groups of alphabetical symbols used by the ancient Lybians, Egyptians, Persians, and also the last graphic systems of the Chinese, called *Ven-tze*, invented by *Sse-koang*.

8th Series. Cursive symbols in groups, and the groups in parallel rows, derived from the last (which are chiefly monumental), and used in the manuscripts of the Mayans, Guatimalans, &c. Consimilar to the actual cursive Chinese, some demotic Egyptian and many modifications of ancient graphic alphabets, grouping the letters or syllables.

9th Series. Syllabic letters expressing syllables, not simple sounds, and disposed in rows. Such is the late syllabic alphabet of the Cherokis, and many graphic inscriptions found in North and South America. Similar to the syllabic alphabet of Asia, Africa, and Polynesia.

10th Series. Alphabets or graphic letters expressing simple sounds, and disposed in rows. Found in many inscriptions, medals, and coins in North and South America, and lately introduced everywhere by the European colonists. Similar to the alphabets of Asia, Africa, and Europe.

11th Series. Abbreviations or letters standing for whole words, or part of a glyph and graphic delineation, standing for and expressing the whole. Used by almost all the writing nations of North and South America, as well as Asia, Europe, and Africa.

12th Series. Numeric system of graphic signs, to express numbers. All the various kinds of signs, such as dots, lines, strokes, circles, glyphs, letters, &c. used by some nations of North and South America, as well as in the eastern continent.

In my next letter I shall chiefly illustrate the 7th and 8th series, so as to decypher and explain one of the most curious and least known of the American modes of expressing and perpetuating ideas. I shall give a figure of a sample of those monumental symbols, with comparative figures of two alphabets of Africa, the nearest related to them, and where the elements may be traced, which are grouped in those glyphs.

“Second Letter to Mr. Champollion, on the Graphic Systems of America, and the Glyphs of Otolum or Palenque, in Central America—Elements of the Glyphs”

Constantine Samuel Rafinesque-Schmaltz

I have the pleasure to present you hereto annexed, a tabular and comparative view of the Atlantic alphabets of the 2 Continents, with a specimen of the Groups of Letters or Glyphs of the monuments of Otolum or Palenque: which belong to my 7th series of graphic signs, and are in fact words formed by grouped letters or Elements as in Chinese Characters; or somewhat like the cyphers now yet in use among us, formed by acrostical anagrams or combinations of the first letters of words or names.

When I began my investigation of these American Glyphs, and became convinced that they must have been groups of letters, I sought for the Elementary Letters in all the ancient known alphabets, the Chinese Sanscrit and Egyptian above all; but in vain. The Chinese characters offered but few similarities with these glyphs, and not having a literal but syllabic alphabet, could not promise the needful clue. The Sanscrit alphabet and all its derived branches, including even the Hebrew, Phoenician, Pelagic, Celtic and Cantabrian alphabets were totally unlike, in forms and combination grouping. But in the great variety of Egyptian forms of the same letters, I thought that I would trace some resemblance with our American Glyphs. In fact I could see in them the Egyptian Cross, Snake, Circle, Delta, Square, Trident, Eye, Feather, Fish, Hand, &c. but sought in vain for the Birds, Lions, Sphynx, Beetle, and 100 other nameless signs of Egypt.

However, this first examination and approximation of analogy in Egypt and Africa was a great preliminary step in the enquiry. I had always believed that the Atlantes of Africa have partly colonized America, as so many ancient writers have affirmed; this belief led me to search for any preserved fragments of the alphabets of Western Africa,

Written in 1832 by Constantine Samuel Rafinesque-Schmaltz (1783–1840). Excerpted from Rafinesque 1832b: 40–44.

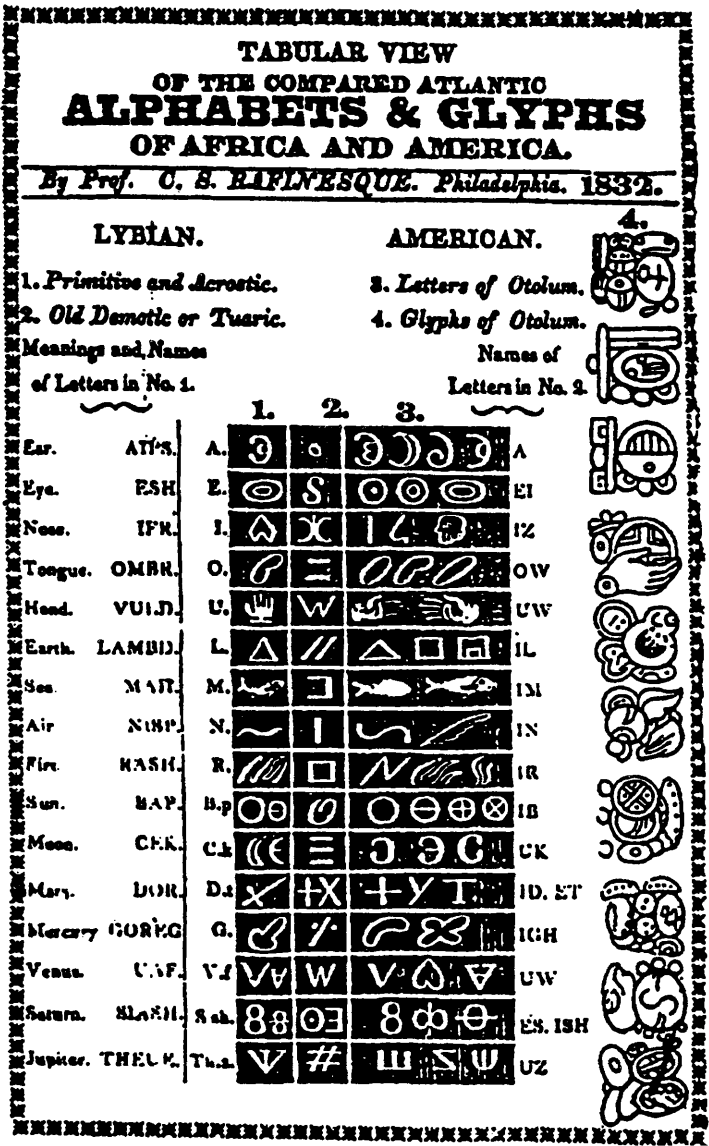


Figure 9.1. Rafinesque's glyph chart or *Tabular View*, which accompanied the second number of the *Atlantic Journal* (Fitzpatrick-Boewe No. 638) and showed the Palenque glyphs copied from Del Río and Cabrera 1822

and Lybia, the land of the African Atlantes yet existing under the names of Berbers, Tuarics, Shelluhs &c. This was no easy task; the Atlantic antiquities are still more obscure than the Egyptian. No Champollion had raised their veil; the city of Farawan, the Thebes of the Atlantes, whose splendid ruins exist as yet in the Mountains of Atlas, has not even been described properly as yet, nor its inscriptions delineated.

However, I found at last in Gramay (*Africa Illustrata*) an old Lybian alphabet, which has been copied by Purchas in his collection of old alphabets. I was delighted to find it so explicit, so well connected, being also an Acrostic Alphabet, and above all to find that all its signs were to be seen in the Glyphs of Otolum. Soon after appeared in a supplement to Claperton and Denham's travels in Africa, another old and obsolete Lybian alphabet, not acrostical, found by Denham in old inscriptions among the Tuarics of Targih and Ghraat west of Fesan: which although unlike the first had yet many analogies, and also with the American glyphs.

Thinking then that I had found the primitive elements of these glyphs, I hastened to communicate this important fact to Mr. Duponceau (in a printed letter directed to him in 1828) who was struck with the analogy, and was ready to confess that the glyphs of Palenque, might be alphabetical words; although he did not believe before that any American alphabets were extant. But he could not pursue my connection of ideas, analogies of signs, languages and traditions, to the extent which I desired and now am able to prove.

To render my conclusions perspicuous, I must divide the subject into several parts: directing my enquiries 1st. on the old Lybian alphabet. 2dly. On the Tuaric alphabet. 3dly. On their elements in the American glyphs. 4thly. On the possibility to read them. While the examination of their language in connection with the other Atlantic languages, will be the theme of my third letter.

I. The old Lybian . . . has all the appearance of a very ancient alphabet, based upon the acrostical plan of Egypt; but in a very different language, of which we have 16 words preserved. This language may have been that of a branch of Atlantes, perhaps the Getulians (GE-TULA, or Tulas of the plains) or of the Ammonians, Old Lybians, and also the Atlantes.

Out of these 16 words, only 5 have a slight affinity with the Egyptian, they are

Nose	Ifr. L.	Nif.E.
Sea	Mah	Mauh.
Saturn	Siash	Sev.
Venus	Uaf	Ath.
Ear	Aips	Ap.

While this Lybian has a greater analogy with the Pelagic dialects, as many as 12 out of 16 being consimilar.

Eye	Esh L.	Eshas P.
Nose	Ifr	Rinif.
Hand	Vuld	Hul, Chil.
Earth	Lambd	Landa.
Sea	Mah	Marah.
Fire	Rash	Purah.
Moon	Cek	Selka, Kres.
Mars	Dor	Hares, Thor.
Mercury	Goreg	Mergor.

Venus	Uaf	Uenas.
Saturn	Siash	Satur, Shiva.
Jupiter	Theue	Theos.

Therefore the numerical analogy is only 32 per cent with the Egyptian, while it is 75 per cent with the Pelagic. Another proof among many that the ancient Atlantes were intimately connected with the Pelagian nations of Greece, Italy, and Spain; but much less so with the Egyptians from whom they however borrowed perhaps their graphic system.

This system is very remarkable. 1. By its acrostic form. 2. By having only 16 letters like most of the primitive alphabets, but unlike the Egyptian and Sanscrit. 3. By being susceptible of 22 sounds by modification of 6 of the letters, as usual among the Pelagian and Etruscan. 4. Above all by being based upon the acrostics of 3 important series of physical objects, the 5 senses represented by their agents in man, the 4 elements of nature and the 7 planets: which are very philosophical ideas, and must have originated in a civilized nation and learned priesthood. 5. By the graphic signs being also rude delineations of these physical objects or their emblems. The ear, eye, nose, tongue and hand for the 5 senses. The triangle for the earth, fish for the sea or water, snake for the air, flame for fire. A circle for the sun, crescent for the moon, a sword for Mars, a purse for Mercury, the V for Venus, double ring for Saturn, and trident for Jupiter. Venus being the 5th planet has nearly the same sign as U the 5th letter.

These physical emblems are so natural and obvious, that they are sometimes found among many of the ancient alphabets; the sun and moon even among the Chinese. But in the Egyptian alphabets, the emblems apply to the difference of languages and acrostic feature. Thus the hand applies to D in Egyptian instead of U, the eye to R, the circle to O, the snake to L, &c.

II. The second Lybian alphabet No. 2, in the Tables, was the ancient alphabet of the Tuarics, a modern branch of the Atlantes, until superseded by the Arabic. Denham found with some difficulty its import, and names of letters which are not acrostic but literal, and 18 in number. It is doubtful whether these names were well applied in all instances, as the explainer was ignorant and Denham not aware of the importance of this alphabet. Some appear not well named and U with V have the same sign W; but these are always interchangeable in old language, and in alphabet No. 1 V is called UAF instead of VAF, and U is VULD instead of UULD!

As we have it, this alphabet is sufficiently and obviously derived from the First, 11 out of the 16 letters being similar or nearly so, while only 5 are different, E, M, R, G and Z. Yet they are by far more alike than the Demotic is from the Hieratic Egyptian, and I therefore deem this No. 2 a Demotic form of the ancient Lybian or Atlantic.

I might have given and compared several other Lybian alphabets found in inscriptions; but as they have been delineated without a key nor names, it is at present very difficult to decypher them. I however recommend them to the attention of the learned, and among others, point out the Lybian inscription of Apollonia, the harbour of Cyrene, given by Lacella in his travels in the Cyrenaica. The letters of this inscription appear more numerous than 16 or even 22, and although they have some analogies with the 2 Lybian alphabets, yet approximate still more to the Demotic of Egypt and

the Phenician. But the inscriptions in Mount Atlas and at Farawan, when collected and decyphered, will be found of much greater historical importance.

III. Meantime in the column No. 3 of the tabular view are given 46 Elements of the Glyphs of Otolum or Palenque, a few of these glyphs being given also in column No. 4. These 46 elements are altogether similar of derived from the Lybian prototypes of No. 1 and 2. In some cases they are absolutely identic, and the conviction of their common origin is almost complete, particularly when taken in connection with the collateral proofs of traditions and languages. These elements are somewhat involved in the grouping, yet they may easily be perceived and separated. Sometimes they are ornamented by double lines or otherwise, as monumental letters often are. Sometimes united to outside numbers represented by long ellipses meaning 10 and round dots meaning unities, which approximates to the Mexican system of graphic numeration. Besides these 46 elements, some others may be seen in the glyphs, which I left off, because they are too intricate; although they appear reducible if a larger table could have been given. There is hardly a single one that may not be traced to these forms, or that baffles the actual theory. Therefore the conclusion must occur, that such astonishing coincidence cannot be casual, but it is the result of original derivation.

The following remarks are of some importance.

1. The glyphs of Otolum are written from top to bottom, like the Chinese, or from side to side indifferently like the Egyptian and the Demotic Lybian of No. 2. We are not told how No. 1 was written, but probably in the same way. Several signs were used for the same letter as in Egypt.
2. Although the most common way of writing the groups is in rows and each group separated, yet we find some framed as it were in oblong squares or tablets like those of Egypt. See plate 12 of the work on Palenque by Delrio and Cabrera. In that 12th plate there are also some singular groups resembling our musical notes; could they be emblems of songs or hymns?
3. The letter represented by a head occurs frequently; but it is remarkable that the features are very different from those of the remarkable race of men or heroes delineated in the sculptures.
4. In reducing these elements to the alphabetical form, I have been guided by the mere plausible theory evolved by similar forms. We have not here the more certain demonstration of Bilingual inscriptions; but if languages should uphold this theory, the certainty will be increased of the Atlantic origins of Otolum.

IV. But shall we be able to read these glyphs and inscriptions without positively knowing in what language they were written! The attempt will be arduous, but is not impossible. In Egypt, the Coptic has been found such a close dialect of the Egyptian, that it has enabled you to read the oldest hieroglyphs. We find among the ancient dialects of Chiapa, Yucatan and Guatemala, the branches of the ancient speech of Otolum. Nay, Otolum was perhaps the ancient TOL or TOLA, seat of the Toltecs (people of Tol) and their empire; but this subject will belong to my third letter. I will now merely give a few attempts to read some of the groups. For instance.

1. The group or word on the seat of the sitting man of plate 4 of monuments of Palenque, I read UOBAC being formed by a hand, a tongue, a circle, an ear and a crescent. It is perhaps his name. And underneath the seat is an eye with a small circle inside meaning EB.
2. In plate 5, is an eye with 2 annexed rings, meaning probably BAB, and perhaps the Sun, which is BAP in the Lybian alphabet.
3. In plate 7, the glyph of the corner with a head, a fish and a crescent means probably KIM.
4. The 1st glyph of plate 15, is probably BALKE.
5. I can make out many others, reading ICBE, BOCOGO, POPO, EPL, PKE, &c.

If these words and others (although some may be names) can be found in African languages, or in those of Central America, we shall obtain perhaps the key to the whole language of Old Otolum. And next reach step by step to the desirable knowledge of reading these glyphs, which may cover much historical knowledge of high import. Meantime I have opened the path, if my theory and conjectures are correct, as I have strong reasons to believe.

Besides this monumental alphabet, the same nation that built Otolum, had a Demotic alphabet belonging to my 8th series; which was found in Guatemala and Yucatan at the Spanish conquest. A specimen of it has been given by Humboldt in his *American Researches*, plate 45, from the Dresden Library, and has been ascertained to be Guatemalan instead of Mexican, being totally unlike the Mexican pictorial manuscripts. This page of Demotic has letters and numbers, these represented by strokes meaning 5 and dots meaning units, as the dots never exceed 4. This is nearly similar to the monumental numbers.

The words are much less handsome than the monumental glyphs; they are also uncouth glyphs in rows formed by irregular or flexuous heavy strokes, inclosing within in small strokes, nearly the same letters as in the monuments. It might not be impossible to decypher some of these manuscripts written in languages yet spoken, and the writing was understood in Central America, as late as 200 years ago. If this is done it will be the best clue to the monumental inscriptions.

Philadelphia, February, 1832.

Note. While this letter is going to press, we hear of the death of the learned Champollion, a great loss to sciences and erudition. The 3 letters directed to him were written in January, February and March of this year, while his career of usefulness was yet unimpaired; but they were as much intended for the learned all over the world, as for himself, and therefore were printed instead of being sent. The third which is to appear in the next number, will however be inscribed to Klaproth as a substitute.

We have lately heard that the 1st number of 3 excursions to Mitla and Palenque, performed in 1805 to 1807, by Capt. Dupaix, has lately been published in Paris under the title of *Mexican Antiquities*; but it has not reached us.

Researches, Philosophical and Antiquarian, concerning the Aboriginal History of America

James Hugh McCulloh

Rafinesque was not the only person in North America whose interest was aroused by early publications on the antiquities of Middle America. More systematic than Rafinesque's work on the subject were the contributions of James H. McCulloh, a Maryland physician who graduated from the University of Pennsylvania (G. Stuart 1989). His main opus is an extensive survey of information on the ancient peoples of the New World, commendable both for its scope and for its critical approach to sources. It was first published in 1817 and later, in a much enlarged version, in 1829 (McCulloh 1817, 1829).

As pointed out by George Stuart (1989), the main contribution of McCulloh was his identification of the pages in the Dresden Codex, published by Humboldt (1810), as belonging to the same kind of writing that appeared in the Palenque texts, known from Antonio Del Río and Paul Félix Cabrera (1822). McCulloh also argued that this type of writing was distinct from that of the Mexican codices. McCulloh's views on Maya writing were influenced by those of Rafinesque, with whom he corresponded on the subject (Rafinesque 1828a–d).

[pp. 299–303]

But if the reader has been surprised with the description of such extensive and even magnificent architectural ruins, which appear to be also not unfrequent in the kingdom of Guatemala, we conceive that a greater source of wonder will be found in what we have to say concerning the drawings, sculptures, and hieroglyphics, found on the walls of these ancient monuments.

Appended to Del Río's memoir, are seventeen plates, containing drawings of the various objects observed by him at the city near Palenque, and which are chiefly representations of the hieroglyphic or emblematical figures, to which he refers in various pages of his description.

Written in 1829 by James Hugh McCulloh (1791–1869). Excerpted from McCulloh 1829.

Any one conversant with the picture books of the Mexicans, will be immediately struck with the very great superiority of the drawings exhibited by the Guatemalan artists, which we have every reason to think have been faithfully copied by Del Río, as is manifested by the extreme minuteness with which all the details are expressed. The tout ensemble, has a character peculiar to itself, entirely different from any thing observable in the European style of drawing. We must also take notice of the identity of the character preserved in every one of the plates, which to one accustomed to use the pencil, is not only abundant proof of the skill of the artist, but when these figures are unlike those to which we are accustomed, it becomes almost conclusive that the copy has been faithfully made.

In the decorations of the heads of the figures, we certainly discern something like the drawings of the Mexicans, who by this means expressed the name, history, or character of the individual thus represented, and which we may reasonably presume, answers the same intention in the Guatemalan drawings. But in the form of the body and limbs, and in the attitudes in which they are exhibited in Del Río's plates, we have an accuracy of anatomical form and proportion, very far exceeding any thing hitherto found in Mexico. I know not whether the proportions of the human body are better represented by any European artist not of the first excellence; but at any rate, we may safely say, they are fully equal to the better class of sculptures among the Hindoos, as exhibited for instance, in the numerous plates to Moor's *Hindu Pantheon*.

This correctness of anatomical proportion in a sculpture of the people of Guatemala, which fell under the examination of Baron Humboldt, excited his doubts of its being altogether an aboriginal drawing, from the very circumstance of its being so much superior to those of the Mexicans. His scepticism, however, arose from the belief that the sculpture which he denominates "Mexican monument found at Oaxaca" (Plate xi. Paris edition, folio) was brought to him as being of Mexican design. This was found to be a mistake, which he corrects in the notes to his *Atlas Pittoresque* 320, or in the English translation, ii. 254, where he says the monument in question was found near the city of Guatemala.

In the plates to Del Río's memoir, is one representing this same subject, and it is copied perhaps from the very same sculpture, as the figures are exactly alike excepting some unimportant finishing in the ornamental decorations of the head. We are thus further enabled to establish Del Río's claim to exactness as a copyist, and having ascertained this point in one instance, we may the more willingly rely upon the other drawings he has given; for in every one of the ten plates that contain human figures, is the very same style of design, and all are equally correct in anatomical proportions as the one described by Baron Humboldt as above quoted. The anticipated want of sufficient patronage prevents our furnishing the reader with a copy of some of the interesting drawings of Del Río's memoir.

But the most curious and important matter of Del Río's plates, are the hieroglyphic characters connected with several of those figures, whose exact forms and proportions we have just described.

As it is impossible by any language of description, to convey an idea of the nature of these hieroglyphic figures, we have selected for the purpose of illustrating our subject,



Figure 10.1. A column of glyphs from Palenque

a column of them, arranged in perpendicular order¹ opposite to the back of a remarkable personage, whom we presume to be a priest.

If we could have been able to exhibit a copy of the whole plate from which the annexed column has been extracted, it would be unnecessary to observe that the figures in the margin are not mere fanciful ornaments to the other parts of the sculpture, as persons unaccustomed to Mexican antiquities might suppose to be the case.

My first impression on viewing these hieroglyphics was, that they were marks of days or years, according to a system analogous to that we have already described in our account of the Mexican astronomy. But a very little examination shewed that these hieroglyphics were not simple, but compound figures. I then supposed, that as the Mexicans had used their simple hieroglyphics in periodical series, that possibly these compound figures were made by the union of the different figures of a periodic series, which when thus combined, composed each group of the Guatemalan hieroglyphics.

But though I think, that generally, three figures may be discerned in each group, yet there are others apparently composed of two, four and five figures, which not only destroys the regularity of such a composition as I had supposed, but it is evident besides, that this is not the key to the construction of the hieroglyphic group; for we ought then to find at least one or more figures in each compound, like the one which precedes or follows any particular group, which is not the case.

I am therefore unable to perceive any principle which would shew them to be hieroglyphic marks arranged either in an arithmetic or chronological order.

That these hieroglyphics express ideas, we can hardly doubt, as similar arrangements of them are annexed to various personages in Del Río's plates, which are entirely different both in order and composition from those attached to any other figure. In a few instances, we have observed the repetition of some of the groupings in a different arrangement; but the component parts of the groups, may be frequently seen in the composition of different groups, united with other parts not found repeated.

Hence I would infer, that each group conveys an idea or sense analogous to the characters of the Chinese, who after making the mark of the radical, annex to it various other significant marks, by which the sense is almost infinitely extended in each genus of their ideas. To express myself more distinctly, we observe that among the Chinese the heart is a genus, whose radical mark perhaps originally of that shape, is now expressed by a curved line. By the addition of other significant marks to this radical, all the sentiments, passions, and affections, are denoted which can be referred to our moral feelings or sensibilities, and thus in like manner with the other characters of their writing.

The Chinese characters in present use, bear no resemblance to the objects they once represented; but this is supposed to have ensued from the greater facility with which the present marks are made, being the result of the changes constantly taking place in every succeeding age, by which each generation of writers endeavoured to simplify the characters used by their predecessors. But originally, according to the best authority, (Morrison, *Chin. Dict.* x) it seems highly probable, perhaps "unquestionable," that the characters of the Chinese language "originated in pictures of visible objects, and from thence by allusion gradually extended from things visible and capable of being represented, to things immaterial and beyond the cognizance of the senses." This I believe is also the opinion of the Chinese themselves.

Assuming therefore the fact, that the characters of the Chinese writing were originally hieroglyphics more or less abridged in the drawing, I think we may safely infer, that the Guatemalans had proceeded on a similar plan, and that their hieroglyphics do not represent sounds or words, but ideas, which by some arbitrary system are connected together, so as to convey to the mind those particulars of history or religion, they might consider important to record.

Though we labour under the very great disadvantage of not knowing the real signification of these hieroglyphics, I think we cannot be wrong in considering them as expressing ideas on the Chinese plan. But as the monuments of Palenque are still in existence, it is to be hoped that some man of science will ere long ascertain the real nature of these singular hieroglyphics with greater force of argument than we have been able to apply to the subject.

We have no information whether similar hieroglyphic characters are found in other parts of Guatemala, a circumstance, however, we need not be surprised at; for Del Río does not clearly appear to me, to have been aware of those that he has depicted in his plates of the ruins of Palenque. But as he describes some monuments in Yucatan to be adorned with figures of men and animals, similar to those he has described on the ruins of that ancient city, it is by no means improbable that the hieroglyphic characters are to be observed there also.

[pp. 304–5]

Among all the collections of picture writings usually denominated Mexican, that have been preserved by European curiosity, there are none that I know of that are considered of Guatemalan fabrication; at any rate, none are so designated by Baron Humboldt, the only savant who has treated expressly of such subjects. Yet I cannot but think it highly probable, that one at least, has been preserved from the general destruction, which that great antiquarian has introduced in his *Atlas Pittoresque*, without particular recognition. We allude to the hieroglyphic manuscript preserved in the royal library of Dresden, of which a specimen is furnished in the 45th plate of Humboldt's splendid work.

We are induced to make this observation on that manuscript, from perceiving that around the figures of men and animals depicted on the pages, are a number of hieroglyphic characters, arranged in horizontal lines as if containing matters of comment or explanation. That these characters are really ideographic, I think will be the impression of every one that inspects the plate of Baron Humboldt's atlas, and from being so much like the characters depicted in Del Río's monuments of Palenque, I presume, is plausible ground to infer a Guatemala origin for the Dresden manuscript.²

Baron Humboldt calls this manuscript Aztec or Mexican, but as he was ignorant of its existence, until after his great work on the monuments of America was actually in press, he had not sufficient time to investigate particularly its history and origin. It is said in the English translation of Humboldt's *Researches*, that this manuscript was purchased at Vienna, by the librarian Goetze, in his literary journey to Italy A.D. 1739. The baron's words are not so positive, being, "paroit avoir été acheté à Vienne." The correction, however, in this instance is not of much consequence.

Humboldt describes it to be drawn upon paper made of metl, (*Agave mexicana*) and like other manuscripts he had procured in Mexico: "but what renders it most remarkable, is the disposition of the simple hieroglyphics, many of which are arranged in lines as in a real symbolic writing. On comparing the 45th plate with the 13th, and 27th, we see that the Codex Mexicanus or Dresden, resembles none of those rituals, in which the image of the astrological sign, that governs the half lunation or small period of thirteen days, is surrounded by asterisms of lunar days. Here a great number of simple hieroglyphics follow each other without connexion, as in the Egyptian hieroglyphics, and the keys of the Chinese." (Humboldt, *Res.* ii. 146)

We cannot but regret, that this great archæologist had not sufficient time to study this singular manuscript at full leisure; for we can only suggest considerations derived from his plates, under every disadvantage that could embarrass the investigation. But

we cannot err in saying, that not only the hieroglyphic characters of this manuscript, distinguish it from all others of Mexican workmanship, but the very drawings of men and animals, and particularly of the former, are much superior to any similar work of undoubted Mexican fabrication, as far as they are represented in the *Atlas Pittoresque*. We have therefore two particulars, first, in the hieroglyphic characters, and secondly, in the superior drawing, by which we may be apparently justified in the belief, that the Dresden manuscript is not of Mexican origin; and in these points of difference, it agrees with what we should expect from the hands of the Guatemalan artists.

[p. 307]

Under these circumstances of perplexity, the safest course we can follow, is, after putting the reader on his guard by the above recital, to consider at least for the present, that the Dresden manuscript is of Guatemalan fabrication; as it presents greater internal evidence in favour of such an hypothesis, and there are perhaps fifty chances to one, between the probabilities of procuring it from Guatemala than from the remotely situated Panoes.

We are unacquainted with any other matters of a scientific nature involved in the history of the Guatemalan nations, excepting their astronomic calendars; whose features we perceive were exactly like those of the Mexicans, concerning which we have discoursed at length in the preceding chapter. This conformity was to be expected; for the Mexicans attributed their knowledge of that system to the Toltecas, whose civilized institutions we have every reason to believe, were generally imparted to the Guatemalan nations.

NOTES

1. We have not thought it amiss to observe, that other series of these hieroglyphics are placed in a horizontal line, and some like the two sides of a right angle, one side of which is horizontal, and the other depending from the right hand end.

2. Peter Martyr (*Hackluyt's W Indies*, 168) describes the books of the people of Yucatan to be written "in characters which are very unlike ours, but written after our manner, line after line, with characters like small dice, fish hooks, snares, files, stars, and other such like forms and shapes; and between the lines, they paint the shapes of men and beasts, especially of their kings and nobles."

This relation seems to agree very well with the character of the Dresden manuscript; and Peter Martyr's description of the proper Mexican books at page 234, will justify the belief, that the last were different in appearance from the former.

Lettre à M. Léon de Rosny

Charles Étienne Brasseur de Bourbourg

Few personalities in Mesoamerican studies can compare with Abbé Brasseur de Bourbourg, whose contributions were as broad as they were controversial. His interpretations, based on uncritical readings of ancient texts supplemented by a rich imagination, are long forgotten, but his indefatigable search for documents on the ancient peoples of Mesoamerica left a permanent imprint on Maya epigraphy. Some of our most important primary sources—Landa's Relación, the Popol Vuh, and part of the Madrid Codex, among others—came to light because of Bourbourg's dogged pursuit.

After his youth in Bourbourg (now Belgium), Brasseur spent several successful years as a journalist and novelist, entering the priesthood in 1838, a step he reportedly took to follow and indulge his intellectual preoccupations. His first book on New World topics was a history of Canada, where he lived in 1845–46. His passion for Mesoamerican antiquities developed thereafter and, in 1848, resulted in the first of his many visits to Mesoamerica. The rest of his life would be devoted to a restless search for clues to the origins and ancient history of the Mesoamerican Indians (Mace 1973; Escalante Arce 1989).

The congenial personality and passionate concerns of the abbé opened the doors, on both sides of the Atlantic, of many archives with records of the Mesoamerica past. In 1863, Brasseur found the manuscript of Landa's Relación among the collections of the Royal Academy of History in Madrid. By that time, he already enjoyed a substantial reputation as an authority on Mesoamerican peoples, having already published his four-volume Histoire des nations civilisées du Mexique et de l'Amérique-Centrale (1857–59)—his major general treatment on the subject—as well as his edition of the manuscript he entitled the Popol Vuh (1861) and his grammar of the Quiché language (1862). The grammar was taken largely from the earlier work of Francisco Ximénez and Ildefonso Flores, but it also contained the text of the Rabinal Achí, another of his major discoveries, which he recorded in 1855 while serving as parish priest in the Quiché town of Rabinal, Guatemala.

By providing a rich primary source on the life of the Yucatec around the time of the Spanish conquest, Brasseur's edition of Landa's Relación (1864) marked a turning point in Maya studies. One reason for this was Landa's description of elements in Mayan script. Two decades earlier Stephens and Catherwood (Stephens 1841, 1843) had drawn international attention to

Written in 1869 by Charles Étienne Brasseur de Bourbourg (1814–74). Excerpted from Brasseur de Bourbourg 1969: 78–86.

the sculpture and architecture of Middle America, recording monuments covered with enigmatic inscriptions and publicizing Juan Pío Pérez's explorations of the complexities in the Yucatec calendar. Not long before, bilingual texts had proved essential to the decipherment of the Egyptian and cuneiform writing systems. By striking coincidence, Landa apparently offered the same opportunity to scholars of Mesoamerica: a character-by-character equivalence between the ancient Maya hieroglyphs and the letters of the Latin alphabet, together with lists of calendrical signs and a detailed account of their function and ritual associations.

Brasseur was the first to apply Landa's information to the decipherment of a glyphic text, the *Codex Troano* (a portion of the *Madrid Codex*), which he identified in the library of its Spanish owner in 1866. Despite the abbé's confident assertions, his attempt was far from successful and did not fail to bring strong criticism in his own time, discrediting not only his interpretation, but to some extent Landa's text as well. Growing criticism by other scholars embittered Brasseur in the last years of his life. He died in Nice in 1874.

You have asked me, Monsieur, for a note on the interpretation of hieroglyphic inscriptions from Yucatan, which has recently been discussed in certain journals. Rather than giving you a simple notice, I will provide a complete demonstration of my discovery in the attached pages of *Manuscrit Troano*, which I am honored to transmit to you together with a translation of the symbols and hieroglyphs they display. The interpretation of these two plates will suffice to dissipate all doubts, and you will be convinced, after reading it, that it is not without reason that I have proclaimed my *Eureka*; you will have complete proof that I have succeeded in lifting the veil that, for so many centuries, covered the mysterious history engraved on the antediluvian palaces of Palenque.

You have seen in my house both the original manuscript and the reproduction that has been made through lithochromy, by order of M. the Minister of Public Instruction: the execution, painstakingly careful, is due to M. Henri Bourgeois, who accompanied me to Yucatan five years ago, and who, after giving the final touch to this work, has gone to seek his fortune in Central America. The great material advantage of this document lies in its being a very ancient original, and perfectly preserved: it is missing but a few characters and symbols, more or less obliterated; the title itself, a sort of summary that appears in the first place, still exists. It was while reexamining the proofs of this curious book that I succeeded, little by little, in deciphering its enigmas: the alphabet and the signs of the days of the Maya calendar, published by me five years ago, together with the *Relation des choses du Yucatan* by Landa, have been my Rosetta stone, and have served me as a point of departure. Today, I lack for nothing: I master all the inscriptions, in spite of the numerous variants of every character, and the same key that served to read the *Manuscrit Troano* will allow me to read the *Ms. de Dresde*, the *Ms. Mexicain No. 2* of the Imperial Library, as well as the inscriptions of Palenque and the monoliths of Copan. The work where I reveal my complete key to the public is presently being printed at the Imperial press, under the title *Études sur le système graphique et la langue des Mayas*. This work comprises a monograph on documents of the same origin as the *Manuscrit Troano*, with the final explanation of the characters; some *Éléments de Grammaire maya*, and a

Vocabulaire of more than a thousand words, taken mainly from printed writings, where each will carry a letter indicating its origin.

The reading of *Manuscrit Troano* as well as other monuments of the same class should be done in the Maya language. The inscriptions offer three kinds of readings in their pages themselves. The first is composed of images, whose aspect immediately hits the eyes with an appearance of extreme ugliness and rudeness: these images are those of the forces of nature, personified and turned into gods of the Toltec religion. All are composed of figurative signs, which are to be read, and some of which can be read phonetically. The second reading is that of inscriptions themselves, beginning from bottom to top and following from right to left, one group after another, the lowermost first, followed by that which is superposed. However, what is curious in these inscriptions is that if one reads them in a single line, one equally finds a sense that is analogous to the first, but that has seemed to me less clear and less explicit. These inscriptions are composed of phonetic characters of the alphabet about which Landa has provided us the first clue. Some are alphabetic, others monosyllabic, mixed with the signs of days and sometimes with figurative characters, of which several have a striking analogy with those of the Mexicans, partly published by M. Aubin. The third reading is that of the legend: with this term I designate the columns composed of one or two series of round or square signs, invariably chosen among those of the twenty days of the Maya month. You will easily recognize them in the two attached plates; the second one has no other signs, with the exception of three or four groups, isolated in the image. Now, this legend is always an abbreviated summary of the main inscription, whereas the figurative images are its representation. Hence, you have there three testimonies for one, the three of them proving the historic fact that is its object; in addition, the numerous variants that are found in the text add a fourth, since each character is not modified from one form to another but by reason of the event being written, of which it is a veritable determinative, still representing an abbreviated form offered by the symbols and images of each table.

At this point, you will ask what do these inscriptions tell, what is the secret knowledge they convey? Eh! Well, they confirm point by point, with innumerable details, what I have advanced in my last work, *Quatre lettres sur le Mexique*,¹ after the *Codex Chimalpopoca* and the original Mexican documents of the Kingsborough collection. This is the history of the cataclysm, maybe cataclysms (since I have not yet had the time to check this completely), which have caused a part of ancient America to submerge, particularly the part that, covering the Gulf of Mexico and the Caribbean sea down to the Orinoco, continued advancing several hundred leagues toward Africa and Europe. In the first series of *Manuscrit Troano*, you will find all the prehistoric history of the rise of the mountains and the submergence of the ancient land; in the second, the detailed account of the rising of the Lesser Antilles.

For the non-initiated, for the commoner and for the Spaniards at the time of the conquest, this book contained in its images—so grotesque in appearance—the history of the gods and heroes, which one evidently read, following an accepted interpretation, and which one finds again in all the Toltec, Aztec, or Mexican histories: for me, this interpretation has long been the only one possible; it is the one that M. Aubin has commented on so many times as well as myself, and whose distorted language, in the *Popol Vuh* as

well as in the *Codex Chimalpopoca*, made me desperate at times. The style does not become fully grammatical, except when read according to the system of geological history. Who knows if it is not the same with the history of the Indus, Egypt, and Assyria? Thus, the commoner knew but the history of the heroes, personifying the forces of nature: in the same way I assure you that the knowledge I have acquired after twenty years in the Mexican books has been highly useful in this circumstance.

I have not the least doubt that it will soon be discovered in other works of the same genre as this document, as well as in those published by Kingsborough, the most ancient history of the known world. The Mexican manuscripts of Oxford, that of Rome, particularly the Vatican original and the beautiful *Ms. Borgia* of the "Propaganda," contain all the details of the rising of the American land. I say this with more assurance because I find them in the *Codex Chimalpopoca*, which is nothing but a written transcription of these monuments; this is the one that I continue translating, and there I have discovered chronological dates perfectly established and going back well before the most ancient history of Egypt. I will give you the proof of this. The beginning of the volcanic movements that begin the glacial period, and that later on would determine the cataclysm, is marked, in this precious document, with the sign *Ce-Acatl*, One Reed, a symbol that is identical with the *yoni-lingam* of India, that is, 11,492 years before the year 1519, the time of the landing of Cortés in Mexico, which gives us 9,973 years before our era. This is the most ancient date displayed in the *Codex Chimalpopoca*, from which the others flow next, with the most regular order. The end of the glacial period that ends with the first cataclysm is marked with the sign *Ce-Tecpatl*, One Flint, and more literally, "extended bed of ice," the year 8452 before our era. The beginning of the Toltec sacerdotal period, and the triumph of the civilization to which the name of *Quetzal-Coatl* served as banner, falls on the sign *Macuilli-Calli*, Five House, the year 6593 before the Christian era. Less than three centuries later, a revolution expelled the priesthood and the primacy of the cult of Quetzal-Coatl: that of Tezcatlipoca overthrows it in the year 6593 before our era; this is the time of the great religious dispersion, it is the time of the gynecocratic domination, especially in the Antilles, probably also the time of a partial physical cataclysm, to which this revolution would appear connected. I still do not have enough translated to be certain of this; but it is almost beyond question that there was a great cataclysm at another sign *Ce-Tecpatl*, One Flint, in the year 4292 before the Christian era, the epoch given as that of the ruin and complete destruction of the Toltec civilization. It is probably then that the interruption was consummated, which had already begun several years before, of the relations that should have existed between the two worlds since the birth of the Toltec civilization and the dispersion of the priests of Quetzal-Coatl.

It is the *Codex Chimalpopoca*, where each sign, instead of being interpreted as a year, according to the Spaniards, should be interpreted as an indication of thirteen years, as demonstrated by the reading of the manuscript of Motolinía,² in accordance with the history reserved for those initiated in Mexican mysteries. Furthermore, there is the confirmation of the essay on Mexican astronomy written by the Jesuit Fabrégat for Cardinal Borgia, who owns the beautiful manuscript called by its name; it is Fabrégat, whose work³ was abundantly consulted by Humboldt at Velletri, who made us know the great Mexican periods of 1,040 years, of 1,460 and 4,420 years, which he found marked

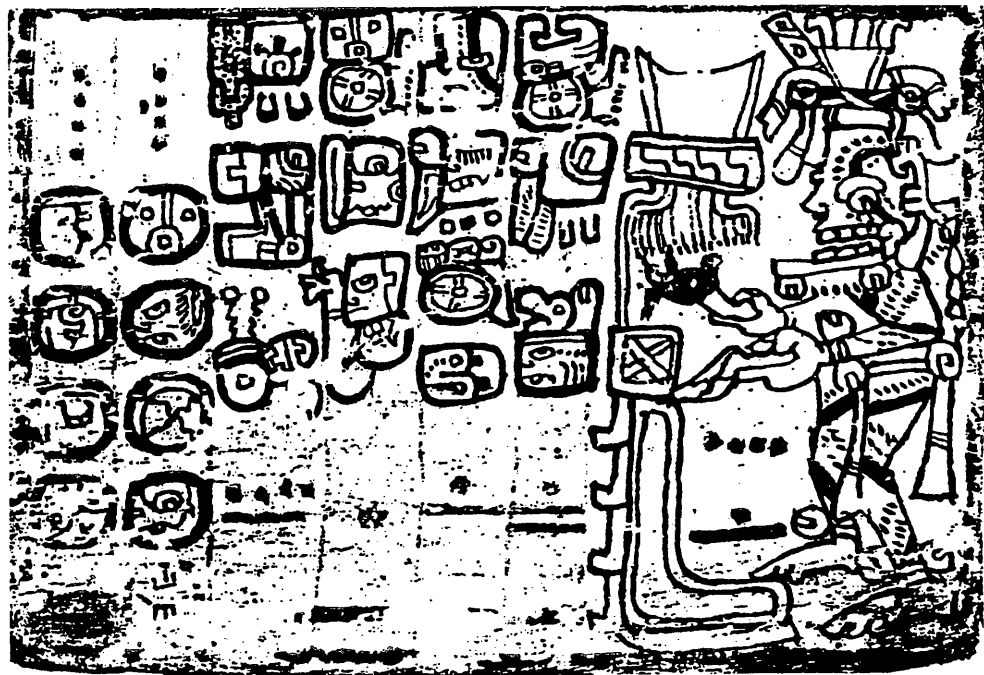


Figure 11.1. Page XXVIII from the Troano Codex (page LXXXV of the Madrid Codex), bottom

in the *Codex Borgia*. I hope to be able to publish that essay a little later, at the beginning of *Codex Chimalpopoca*, for which it will serve as a preface and commentary even if there is little connection.

Now, let us proceed to page XXVIII of the first series of *Manuscript Troano*, whose interpretation cannot fail to interest the friends of science [Figure 11.1]. As you can see, that page comprises three tables: these tables follow by rank order those of the three preceding folios, so that between each of them, there are three more tables missing here: I warn you so that your readers will not be perplexed by the lacunae existing between those tables whose translation I will provide.

Being the XXVIIIth of the first series of *Manuscript Troano*, this page represents one of the last acts of the great drama of the cataclysm, and the reader should suppose what the preceding pages say, that is, that the ancient land that not long ago occupied the surface of the Gulf of Mexico and the Caribbean sea, etc., is already descended under the waters, as well as the volcanoes that have determined the ruin. Also, the god that animated them, the god of fire, whose transformations are not one of the least curious things of this document, is represented here as a sort of corpse, a hideous monster with the head of a dead man. It is he whom you see in the right-hand compartment, in the lower table of the folio. Notice his profile, look at his mouth: it is the silhouette of a mountain with an extinct crater; his mandible is a *metlatl*, a stone for grinding grain in Yucatan as well as Mexico, ordinary symbol of the bottom of the sea. His eye is a variant of the character

O, . . . the symbol of a volcanic cone: it still exhales smoke, signified by a black spurt, and gases, by the marks that accompany it. His headdress is composed of ribbons, where one finds again one of the symbols of the raised earth; a black band emerges from the top, cut cross-wise by a white cross of Saint Andrew, symbol of the Gulf Stream and of the four great earthquakes that caused the ancient disaster: at the time of the conquest, this cross still signified the earthquake, as well as the passage of the sun through the ecliptic. Upon the cross emerges a *modius*, symbol of the earth, with flames emerging from it, and at the side one of the variants of the letter *u*, vase or basin, etc. As for the body of the god, it also carries the marks of gases and smoke, etc. It is not altogether extinct, since in one hand he holds the torch with which he will rekindle the volcano, causing a portion of the lands buried under the waters, the Lesser Antilles, to elevate; in the other, he grips a flint knife, *ezanab*, image of the fires that the new volcano will cast. He lights the gas under a sort of dais, formed by the symbol of the submerged earth, supporting another *modius*; the trunk that sustains the dais, marked on top with the seal of the trembling of the destroyed earth, is forever drowned under the ocean: it is the engulfed portion of the continent.

Now, let us see what the inscriptions tell us. I begin by the column of the first three groups, each one composed of three characters that I designate with numbers in order to facilitate your reading.

1	2	3	1	2	3
<i>men</i>	<i>kaan</i>	<i>a</i>	<i>ceel</i>	<i>cimi</i>	<i>A</i>
founded	augmented	water	ice	death	Water ⁴

1	2	3	1	2	3	4	5
<i>ca</i>	<i>Ti</i>	<i>ma-nik</i>	<i>oc</i>	<i>a</i>	<i>ti</i>	<i>ik-</i>	<i>ben</i>
that	There	no more movement	entered	the water	there where	will	blow

○ ● ○	1	2	3	1	2	3
2 mouths over a mountain ⁵	<i>cimi,</i>	<i>a-</i>	<i>pp</i>	<i>Ca-uac</i>	<i>kaan</i>	<i>a</i>
	dead,	exploded		Because too full	augmented	the water

1 2	1	2	3	1	2 3
<i>k-u</i>	<i>ca</i>	<i>li</i>	<i>ah-au</i>	<i>muluc (?)</i>	<i>h-o-</i>
(of the) crater ⁶	that	here	the volcano ⁷	has accumulated	has risen

1	2	3	1	2	3
<i>p</i>	<i>cimi</i>	<i>kaan</i>	<i>ceel</i>	<i>u</i>	<i>thilib</i>
	death	accumulate	ice	Basin	cones in a row ⁸

FREE TRANSLATION⁹

“The accumulated water has established its foundations: it is the ice and the lifeless water with snow that is there without movement. The water has entered there where will blow the two mouths of the cone that was extinguished after having exploded apart in its fullness: the water accumulates over the crater that the volcano has gathered there and raised as if in its hand; it is dead, and the ice heaps up with its snow-capped cones aligned in a row within the basin.”

LEGEND OF THE BOTTOM TABLE, LEFT-SIDE COLUMNS.

1	2	3	4	5
<i>kaan</i>	<i>cimi</i>	<i>ez-an-ab</i>	<i>eb</i>	<i>ahau</i>
elevated (accumulated)	dead	spurt of fire	cone	volcano
	6	7	8	9
.....	<i>lam-at</i>	<i>ik</i>	<i>cib</i>	<i>oc</i>
.....	engulfed in the water	blow	lava	entered

FREE TRANSLATION

“What was elevated is without life; the spurt of fire from the cone of the volcano . . . which was engulfed under the waters; it blows lava where it is entered.”

NOTES

1. *Quatre lettres sur le Mexique, Exposition absolue du système hiéroglyphique mexicain; la fin de l'âge de bronze; origines de la civilisation et des religions de l'antiquité, d'après le Teo-Amoxtili et autres documents mexicaines*, etc. Paris: Maisonneuve et Cie, 1868. 500 pp.
2. *Historia de los mexicanos por sus pinturas*. MS of my collection.
3. *Esposizione delle figure geroglifice del Codice Borgiano Messicano dedicata all'Emo Principe il sig. cardinale Borgia*, etc. MS of my collection.
4. In this group, in the second column, the double horseshoe-shaped sign is figurative, indicating the ice; the second is a variant of the character *cimi*, death, literally, without animation, symbol of the third day of the Maya calendar; the third is a variant of the third *a* of the alphabet, here characterized by a little hatching, one of the signs of the snow, according to all the Mexican documents assembled by Kingsborough.

5. Two mouths over a mountain or a cone, a purely figurative sign that indicates a volcano with two extinct mouths and under the water, but which was first reborn with the rising of Guadeloupe.

6. "Crater" is how I translate *Ku*, generally taken to signify God in Maya. But *Ku* also means the "nest of a bird," "a warm den," and it is represented in the alphabet by a monosyllabic sign, formed by three balls one against the other, like three eggs in a nest. [Editors' note: David Stuart later came to this same interpretation, but without knowledge of Brasseur's speculation.] This nest is that of a volcano; it is the nest of a god, because it is the den of fire, from whence the god issues, both in Maya theology and in *teotl*, in Mexican *te-o-tl*, the life of the way (of the nest) of stone.

7. *Ah-au*, "cane of the water vase," "phallus of the basin," *yoni-lingam*, the ward and the humid, cause of all the volcanic phenomena, etc. This is the name given to the volcanic power, and in particular to the double crater of Guadeloupe, as well as to the Gulf Stream current.

8. Cones in a row, *thilib*, symbol of cones chained like the tail of the rattlesnake, meaning cones in a row, one following the other, posing obstacle or separation, etc.

9. I omit in this translation the bars with the black points, ordinary numerical signs, but also having the sense of lands, where the points indicate the number of cones; the red bars with their points indicate the lands of fire, lava, and volcanic emissions; in the free translation, following my vocabulary, I give complete values to the terms.

The Palenque Tablet in the United States National Museum, Washington, D.C.

Charles Rau

The aesthetic appeal of ancient Maya art to European eyes soon proved to be a mixed blessing. At an early stage, visitors to Maya ruins began to remove sculpted surfaces for eventual display in collections and museums. In the process, they inflicted considerable damage on the sculptures and their architectural surroundings. A tragic example of such destruction is the tablet of the Temple of the Cross at Palenque. When John L. Stephens visited the site in 1840, the tablet was already mutilated (Stephens 1969: 345–46). Of its three vertical panels, only the one to viewer's left remained in situ. Stephens found the central panel thrown on the bank of a nearby stream. The right panel had been broken; Stephens discovered a few of its fragments in front of the temple, although most had been carried away. With the idea of forming a "Museum of American Antiquities" in the United States, Stephens left instructions with Charles Russell, the American consul in Isla del Carmen, Campeche, who would be his agent for purchasing the ruins and, in the meantime, would also direct the preparation and shipment of plaster casts of the sculptures. In 1842, Russell shipped none other than the fragments of the right panel of the Tablet of the Cross. The tablet was kept by the National Institute for the Promotion of Science in Washington, D.C., until 1858, when its collections were transferred to the Smithsonian Institution. Several years later, the tablet suffered yet another breakage during a transfer within the Smithsonian building (Rau 1879: 1–4). The tablet was eventually returned to Mexico.

A study of the tablet at the Smithsonian was undertaken by Charles Rau, curator of the museum's Department of Antiquities. Rau was born in Belgium and studied in Heidelberg. He migrated to the United States in 1848, working as a teacher of German to schoolchildren in St. Louis, Belleville (Illinois), and New York City. Only after 1875 did a position at the National Museum in Washington, D.C., allow him to pursue a long-held interest in American archaeology, mainly in the analysis of museum collections (Hinsley 1981: 42–47).

Although Rau's study recognizes the unity between the writing system represented in this tablet and that of the codices and Landa's alphabet, it also displays an early disenchantment with the alphabet as a key for understanding Mayan script. Rau's work is distinguished by a rigorous

Written in 1879 by Charles Rau (1826–87). Excerpted from Rau 1879: 56–64.

methodology that is exemplified in this article, which includes a detailed account of the archaeological context of the sculpture, as well as high-quality photographs of the inscription. His method of glyph-block designation continues to be used.

After the foregoing it hardly will be necessary to point out the total insufficiency of the results obtained by those savants who have tried to translate the existing manuscript records of Maya origin. The key applied to that purpose has failed to render the desired service, though the close connection between Landa's signs and those of the codices in question is undeniable. The Yucatecs and Central Americans, it appears probable, employed in their writing certain characters as equivalents for sounds, perhaps syllabic, and at the same time, possibly to a great extent, conventional figures imparting a definite meaning. I cannot reconcile myself to the idea that the characters used by those comparatively civilized nations should represent nothing beyond a somewhat systematized picture-writing, while the neighboring Mexicans, as has been shown, already had made some advances toward phonetization. On the other hand, I strongly doubt whether the Mayas and kindred races ever went so far as to express the elementary sounds of their speech by corresponding signs—in short, whether they possessed a written language in our sense. In dilating on the Yucatec characters, Bishop Landa, I repeat, evidently ventured upon a topic with which he was not sufficiently familiar. If, however, contrary to my expectations, they should in future prove to be of greater use than they have thus far been, I shall with great satisfaction modify my present opinion.



Figure 12.1. Glyphs on the left tablet in the Temple of the Cross (after Waldeck)

But, supposing the Maya manuscripts had been translated, in part or entirely, through Bishop Landa's key, it would still be a difficult, if at all practicable, task to interpret the glyphs sculptured on the tablets of Palenque, which evidently are of much higher antiquity than those written records. Admitting for a moment that both, the sculptured glyphs and written characters, were contemporaneous, the former most probably would differ in shape from those traced by the scribe, who, we may suppose, performed his work rapidly, and employed abbreviations and other conventional modifications not used by the artist who chiseled them in bas-relief on stone.¹ These two kinds of characters, however, are not contemporaneous, the sculptures being, in all likelihood, many centuries older than the manuscripts, and during the period intervening between the execution of both, additional alterations in the shape of the written signs may have taken place. Yet the difficulties just mentioned are of subordinate importance, if those arising from changes in the language are taken into consideration. I have elsewhere stated as my belief that the Maya tongue or a kindred dialect was spoken by the builders of Palenque, and, as a consequence, I hold that this language underlies the signs exhibited on the tablets of the ruined city. If we ascribe to these tablets an antiquity of a thousand years—which is probably a moderate estimate—Landa's key, provided that it really were applicable to the Maya language as spoken about three hundred years ago, would fail to disclose the meaning of the Palenquean glyphs, because they express the Maya of a much earlier period, and therefore differing from that spoken at the time of the conquest. But if, as has been maintained, Palenque was built by the Toltecs after their withdrawal from Anahuac in the eleventh century of our era, the glyphic inscriptions, of course, must be referred to a later period. Though I hardly believe in a very high antiquity of the ruins of Central America, I deem it at the same time probable that there existed a pre-Toltec civilization in that part of the continent. The traditions relating to such a condition, and, indeed, the glyphs themselves, corroborate that view.

M. de Charencey has made some attempts to decipher Palenquean glyphs. He gives in the "Actes de la Société Philologique" (Tome 1er, No. 3, Mars 1870) his "Essai de Déchiffrement d'un Fragment d'Inscription Palenquéenne." His exposition is also contained, in an abbreviated form, in Dr. Brinton's "Ancient Phonetic Alphabet of Yucatan." He selected for translation two glyphs of the Group of the Cross, but unfortunately based his experiment upon the illustration accompanying Del Río's report. He first considers the character or combination of characters seen immediately above the child in the hands of the priest, and tries with great pains to show that it expresses the word *Hunab-ku*, which is the name of a Maya god. The worst feature of the proceeding consists in his founding the interpretation upon an incorrect delineation of the glyph. The latter is seen in the reproduction of a part of Del Río's plate. It was differently drawn by Catherwood, as a glance at the accompanying outline plate will show. In Waldeck's delineation the middle oval or shield of the glyph encloses a kind of Maltese cross instead of dots, and, finally, shows the outline of the glyph drawn after Charnay's photograph, which, though not very distinct, exhibits it under a form certainly differing from that underlying De Charencey's interpretation. I cannot here follow his somewhat complicated analysis of the component parts of the character; but I may state that, according to my conception, he has failed in identifying a single one of these parts with one of

Landa’s signs, and, further, that his attempts to prove them to be variations of the latter appear to me equally unsuccessful.

The second figure he tries to interpret is the uppermost in the single row behind the priest. This glyph pertains to the Smithsonian slab, and was copied by Castaneda when the three tablets forming the Bas-relief of the Cross were still in place. The outline plate gives a correct drawing of it, which differs considerably from the same figure in Del Río’s plate. A comparison will show in how far both designs are unlike each other. M. de Charencey thinks the glyph expresses the name *Kukulcan*, which is that of a Yucatec deity corresponding to the Quetzalcohuatl of the Mexicans. In this case the interpreter’s analysis, if possible, is still less satisfactory than in the former; but I could not state the reasons for my opinion without entering into details incompatible with the proposed extent of this publication.

In consideration of the foregoing statements it hardly can be expected that I should express any hope as to the decipherment of the Palenquean glyphs by the means at present at our command. Landa’s key will not suffice, and the prospects for a future solution of the difficulty are rather gloomy, unless some new discovery is made which will afford us a more efficient help for obtaining that most desirable result. Indeed, Brasseur himself seems to have been looking out for such coming assistance in alluding to the possible “discovery of one of those manuscripts which the Mayas, like the Egyptians, placed into the coffins confining the corpses of their priests.”

The affinity between Landa’s signs and the glyphs on the Palenquean slabs is undeniable, and certainly goes far to show that the former are the remnants of a graphic system in vogue among the Mayas and kindred nations in past centuries. This affinity, furthermore, leads me to the inference that the Mayas and the builders of Palenque, if not the same people, were at least closely related to each other.

I will now proceed to point out such analogies as I discovered between both kinds of characters by means of the annexed diagram Figure 12.2, in which the places of the glyphs shown in the outline plate are indicated by small squares, the vertical and horizontal rows being respectively marked with letters and numbers. The method here adopted, though somewhat slow in its application, is so simple that any further explanation would appear superfluous. In some cases, Landa’s signs will be found identical with glyphs or parts of glyphs sculptured on the Palenquean slabs, while in other

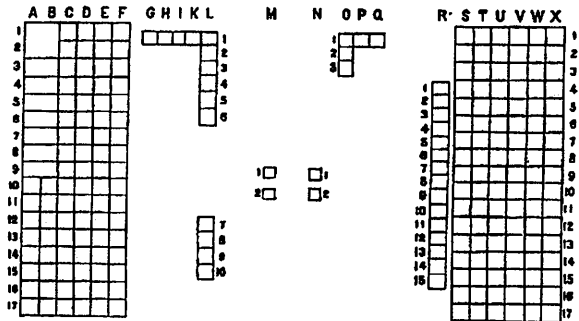


Figure 12.2. Index diagram of the glyphs on the Tablet of the Cross

instances a more or less distinct resemblance can be traced. In the following analysis, which doubtless might be further elaborated, Landa's designations for his signs, whatever their true significance may be, have been retained.

LETTERS AND SYLLABLES.

1.  A form resembling the upper part of H; always in connection with a lower part exhibiting several variations:



Form a; occurs in R4, T7, T15, U16, V5, W4. In S8 and T1 the space enclosed by the inner ring of the lower part is hatched. Placed horizontally, showing a single or double band, in F9, S17 (?), R7 (?), S1.

Form b; in S16, U12, V6, V16, X3.

Form c; occurring only in a horizontal position: Y17, S9 (?).

Form d; somewhat like the preceding one, with the upper portion duplicated, in V15. The upper parts, however, are rather leaf-shaped. A similar form in R12.

Form e, in which the bands are replaced by concentric circles, in T11, T13, T16; somewhat different in W17, X17.

2. Landa gives as a sign for X an imperfect figure of a hand with fingers pointing downward. The hand, almost invariably pointing to the right and exhibiting two concentric rings near the wrist, occurs on the Palenquean tablet as a part of a glyph in A7, B11, C3, D4, F7, L5, O3, R4, R12, S1, T7, T15, U6, U16, V11 (?), W3, W17.—As there is but little resemblance between Landa's sign and the hands sculptured on the tablet, I hardly would venture to suggest that both were intended to convey the same meaning.
3.  Two forms resembling Landa's CU, in B3 (Large, partly hatched), C5, C7, F6, U2, U4, U8, U9, U11 (?), V14, W2, X12, X14.
4.  This combination, not unlike the syllable KU, occurs in T9 and V2.
5.  A figure bearing a distant resemblance to HA. M. de Charencey, in his attempt to translate the glyph above the figure of the child (after Del Río's design), makes it serve for H. It occurs in S5, S7, S11, S13, V4, V9, X7, and less distinctly in several other glyphs.

Among the characters of the Yucatec alphabet are two figures of heads, one of them evidently human and expressing PP, according to Landa; the other more distinctly traced, emits breath from the mouth, and is said to represent a form of the letter X. Heads of men, and also of animals, occur frequently on the Palenquean bas-relief. They show



Figure 12.3. Days of the Maya calendar (Landa)

profiles turned toward the left, and in some cases protruding tongues. I think it would be unsafe for the present to connect these sculptured heads with those of the alphabet.

DAYS

1.  KAN, in T8, U17, X10.
2.   Resembling LAMAT, in C17 (?), W5, S10.
3.  CHUEN, in B6, D1, D5, D13, E5, E10, F15, R2, S6, S12, S15, U3, V13, W1, W15, X6, and not quite as plainly in some other characters.
4.  BEN, always connected with  (portion of the sign for the month POP), in R10, R15, T9.
5.  EZANAB, in M1(?), U7.
6.  Resembling AHAU, in A16, B8, D3(?), T17.
7.  YMIX, in E2, D6; a somewhat different form in X5.

MONTHS

1.  Small part of POP, always combined with  in R10, R15, T9.
2.  Resembles the principal part of PAX; occurs, though with modifications, in AB1, 2, B4, B5, C6, C14, D9, D10, D14, D15, E6, E11, E16, F5, F16, R3, T6, T12,

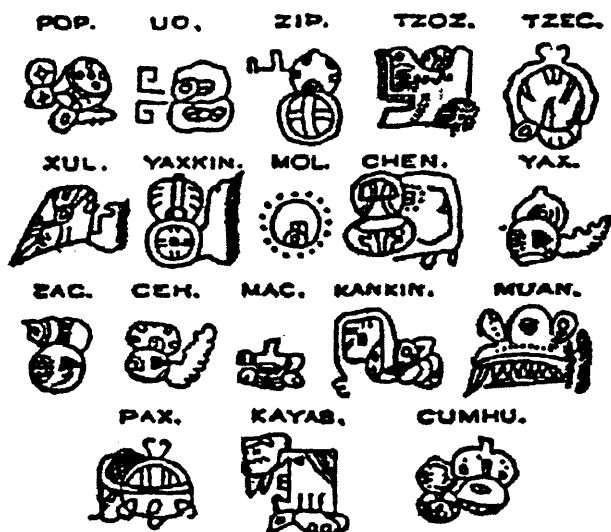


Figure 12.4. Months of the Maya calendar (Landa)

U4, U9, U14, V3, V8, V14, W2, W7, W12, X1, X12, X15. There is a difference in the number of the vertical bars within the semicircular space, and in some cases the bars are hatched. The lower part of the figure likewise displays some diversity in its shape. These variations, it may be assumed, were intended to modify the meaning of the glyphs.

The analogies which I have shown to exist between Landa's signs and the glyphs on the Palenquean bas-relief are in so far of interest as they seem to explain, if nothing else, at least the *general* purport of the latter. Considering that signs, or parts of signs, for months, and more particularly such as denote days, occur, in conjunction with numbers expressed by bars and dots, on the Tablet of the Cross, I venture to suggest that its inscription constitutes a *chronological* record of some kind. The central group of figures probably illustrates one of the events narrated or indicated by the surrounding glyphs. M. de Charencey thinks we have to recognize, in all probability, in the Palenquean inscriptions litanies sung by the priests in honor of the Maya gods.² In advancing this opinion he evidently had the sacred character of the temple in view; but I must confess that I cannot reconcile the chanting of litanies with the frequent signs bearing on the division of time, unless, indeed, the glyphs in question were intended to form a kind of calendar serving to regulate the succession of those religious rites.

Some of the monolithic idols or statues at Copan, in Honduras, which have been described by Mr. Stephens, bear glyphs obviously resembling in general appearance those of Palenque—a circumstance from which a relationship between the ancient inhabitants of these two districts may be inferred. At any rate, their civilization must have been essentially the same. For comparisons I have to refer to Stephens's work on Central America, which contains a full account of the ruins of Copan, accompanied by many illustrations. One of them represents the flat top of a stone altar, six feet square, on which

are sculptured thirty-six glyphs, arranged in rows as on the Palenquean tablets. This view is given on page 141 of the first, and again on page 454 of the second volume, in this instance in connection with a small fragment of the Dresden Codex, inserted by Stephens in order to show the resemblance of its characters to those of Palenque and Copan. In doing so, he certainly manifested his keen faculty of discrimination; but his inference "that the Aztecs or Mexicans, at the time of the conquest, had the same written language with the people of Copan and Palenque" arose from the delusion, shared by Humboldt, Kingsborough and others, of seeing in the Dresden Codex a manuscript of *Mexican* origin.

Though there is undeniably much similarity in the general character of the glyphs of Copan and Palenque, the difference in their details is very striking—indeed so great as to render it plausible that a long period intervened between the building of the two cities, during which considerable changes in the shape of the characters took place. In fact, some archaeologists, taking into consideration the peculiarities of the styles of architecture and sculpture in both cities, regard Copan as the older of the two.³ By these statements, however, I merely intend to convey a suggestion, and not a definite opinion; for there is a possibility that the characters employed by the ancient people of Copan were originally more or less different from those in use among the builders of Palenque.

NOTES

1. In consideration of their shape H. Aubin has designated these characters as "calculi-form." It does not appear to me that this definition admits of a general application. I cannot abstain from quoting here, for the sake of illustration, Sir Charles Lyell's observations on the mutability of languages: "None of the widely spoken languages of modern Europe is a thousand years old. No English scholar who has not specially given himself up to the study of Anglo-Saxon can interpret the documents in which the chronicles and laws of England were written in the days of King Alfred, so that we may be sure that none of the English of the nineteenth century could converse with the subjects of that monarch if these last could now be restored to life. The difficulties encountered would not arise merely from the intrusion of French terms, in consequence of the Norman conquest, because that large portion of our language (including the articles, pronouns, etc.) which is Saxon has also undergone great transformations by abbreviation, new modes of pronunciation, spelling, and various corruptions, so as to be unlike both ancient and modern German. They who now speak German, if brought into contact with their Teutonic ancestors of the ninth century, would be quite unable to converse with them, and, in like manner, the subjects of Charlemagne could not have exchanged ideas with the Goths of Alaric's army, or with the soldiers of Arminius in the days of Augustus Caesar. So rapid indeed has been the change in Germany, that the epic poem called the Nibelungen Lied, once so popular, and only seven centuries old, cannot now be enjoyed, except by the erudite.

"If we then turn to France, we meet again with similar evidence of ceaseless change. There is a treaty of peace still extant a thousand years old, between Charles the Bald and King Louis of Germany (dated a.d. 841), in which the German king takes an oath in what was the French tongue of that day, while the French king swears in the German of the same era, and neither of these oaths would now convey a distinct meaning to any but the learned in these two countries. So also in Italy. The modern Italian cannot be traced back much

beyond the time of Dante, or some six centuries before our time." *Antiquity of Man*; fourth edition, London and Philadelphia, 1873, p. 508.

2. De Charencey, *Essai de Déchiffrement*, etc., in *Actes de la Société Philologique*, vol. 1, no. 3, March 1870, p. 50.

3. "The ruins of Copan, and the corresponding monuments which I examined in the valley of Chamelicon, are distinguished by singular and elaborately carved *monoliths*, which seem to have been replaced in Palenque by equally elaborate *basso-relievos*, belonging, it would also seem, to a later and more advanced period of art."—Squier, *The States of Central America*; New York, 1858, p. 241.

Essai sur le déchiffrement de l'écriture hiératique de L'Amérique Centrale

Léon Louis Lucien Prunol de Rosny

The Société Américaine de France was established in 1857, largely through the enthusiasm of Brasseur de Bourbourg and a small number of scholars. Among them was Léon de Rosny, a student and later professor in the School of Oriental Languages who did extensive research on the language and writing systems of the Far East. Rosny's special concern was Japanese, but he also studied Chinese, Korean, and the languages of Southeast Asia. His distinguished career included the important position of director of the École des Hautes Études (Sorbonne).

Equipped with a comparative background in languages and writing systems held by few other students of Maya writing, Rosny approached the problem of decipherment with considerable rigor. His background allowed him to recognize the mixed nature of the Maya system, in which he identified "figurative," "ideographic," and "phonetic" signs. He also understood the problems in using Landa's alphabet, but nonetheless asserted its basically syllabic nature. Only a handful of his original decipherments have stood the test of time, most conspicuously his clever elucidation of the world-direction signs in the codices. In addition, he was responsible for the first editions of the Cortesianus (1883) and Peresianus (1887) Codices. Today, this pioneer receives less attention than his wide oeuvre deserves (see Rosny 1881, 1904).

[pp. 4-5]

The mysterious writing that I intend to examine in detail in this report has been observed in but a very small number of manuscripts; on the other hand, it figures as monumental writing on many sculpted works of Central America, in Yucatan, Chiapas, Chichen Itza, Palenque, etc. It has been called *calculiforme* (from the Latin *calculus* "small stone"), a very improper denomination, which seems to result from a confusion with another graphic system used in ancient Peru, which couples knotted strings and conventional assemblages of maize grains. The signs that concern us, in effect, do not seem to

Written in 1876 by Léon Louis Lucien Prunol de Rosny (1837–1914). Excerpted from Rosny 1876.

me to be resemble collections of “small pebbles”: they are composed of a whole series of signs copied on the most varied objects, and for this reason are more comparable to the signs of Mexican writing, to those of ancient Egypt, and equally to those rude and primitive images given as examples of the most ancient Chinese writing.¹

With the term *Katun* the Indians identify the stones covered with inscriptions containing the characters that interest us, with the aid of which they take note of diverse periods in their 20-year cycle. From the Maya word *katunil*, which Lizana explains as “ensemble of epochs or cycles, knowledge of the cycles and of the chronological history; ensemble of stones embedded into the walls of temples, marking past epochs and their dates” (*conjunto de épocas o siglos; conocimiento de los siglos y de la cronología; conjunto de las piedras selladas en la pared de los templos, con las épocas y fechas históricas*).² Based on this precedent and other analogous indications that would take too long to reference here, I do not hesitate in employing the word *Katun* to designate the characters in question, and the qualification *Katunic* to designate the entire script.

This script appears in at least two neatly distinct forms: (1) what we see in the sculpted monuments should be designated with the name *hieroglyphic*, because it offers, like the Egyptian script qualified as such, the double character of an engraved script (Greek γλυφω, “to sculpt, to engrave”) and a sacred script *ierou*, “sacred, sacerdotal”); (2) what is found in the manuscripts, which could advantageously be called *hieratic* (ιερατικου), because it is also a sacerdotal script, since this qualification is today generally adopted by Egyptologists to designate an alteration, or if preferred, a graphic simplification of the sculpted characters of Egypt, and because this simplification or alteration is found in analogous conditions in the written monuments of Central America.

It is not impossible—indeed, it seems very probable—that a third script, still more simple or at least more current, might have been used in Yucatan,³ where it would have corresponded to what Egyptology calls *demotic* writing. In the absence of popular documents, certain abbreviated forms of the signs one finds in the American hieratic manuscripts might induce us to believe, to a certain point, in the existence of this popular writing. But, for now, such suppositions are at least as much useless as hazardous; and we have enough to do in elucidating the known texts without venturing into what is still a very premature hypothesis.

In spite of the utility that would result from undertaking simultaneously the study of the American hieroglyphic inscriptions and hieratic hieroglyphs, I have thought it necessary to focus on the latter, except for subsequently presenting certain clarifications that the study of the sculpted monuments might have offered me.

[p. 14]

Our task is to decipher three manuscripts, of which we possess the first, the *Codex Peresianus*, with the seldom contestable guarantees offered by photography; the second, the *Codex Troano*, in the form of a chromo-lithographic facsimile that seems to show great faithfulness of reproduction; and the third, the *Codex de Dresde*, lithographed and hand-colored, with an exactness that seems not completely guarded against criticism.⁴

In undertaking the decipherment of these three manuscripts, we have only one point of departure: the *Relación* of Father Diego de Landa. But, as has been shown, this priceless account furnishes but a very short passage regarding the question of the Yucatec alphabet; and as if to render the task of the paleographer more painful, this passage is of the most deplorable obscurity.⁵ Unfortunately, the manuscript of the *Relación de las Cosas de Yucatán*, which Brasseur had the good fortune to find in the Archives of the Royal Academy of History of Madrid, is not the original, but a copy made, as the celebrated Americanist tells us, about thirty years after the death of Landa, at least to judge from the writing. From the title and as hinted by certain phrases, "this manuscript of Madrid would itself be incomplete, and the copyist would have suppressed intentionally the titles of the chapters that divided it, while leaving provincialisms and orthography that are little intelligible, even for a Spaniard."⁶ In addition, there is a strong suspicion that the copyist, not showing interest in those sections dealing with Katunic writing, might have neglected precisely this part more than any other, and might also have abridged it. The truth is that, as they have reached us, Landa's alphabet and the list of signs of days and months are far from providing a somewhat complete series of the hieratic characters employed by the ancient Maya. And so, a multitude of these characters, even with the aid of the celebrated prelate, are still beyond the present understanding of Americanists.

A portion of the signs that the three lists enclosed in the *Relación* of Father Diego de Landa provide can be easily recognized in the three manuscripts we possess. But it should be quickly added that they represent but the smallest minority of the characters that we distinguish there. In other words, Landa gives us the value of 71 signs (20 for the days, 18 for the months, 33 for the alphabet): an attentive examination of the hieratic texts has shown me more than 700 different signs,⁷ of which more than nine-tenths of the Maya hieratic characters linger in a state of profound and disappointing enigma for the cultivated world.

[pp. 16–17]

In the three Maya manuscripts, in the *Codex Troano* above all, the signs that we know from Landa as signs of the days show up in great numbers in two evidently different contexts. In the first, we see them mixed with a number of signs that, for the most part, are unknown to us; sometimes they are joined with these unknown signs or grouped among them in a way that almost does not allow us to think of a simple calendrical enumeration; the passages where the signs in question figure in this way must form the text properly, the narration of these old hieratic documents. In contrast, in the other context we find these day signs reproduced in vertical columns, isolated from any other graphic mark, and in a disposition that reminds us greatly of the almanacs. I shall first occupy myself with columns that seem to me not to comprise any signs but those of the days.

In the first page of *Codex Troano*, following the ordinary order of European books, or in the last page, following the pagination given to this manuscript by Brasseur de Bourbourg, and in the upper part of this page, there appear a series of signs of the days beginning with the sign  *ymix*, which Landa gives as being the one with which began,

for the ancient Maya, "their computation of the days or calendar."⁸ To the right of this sign come in succession the six day signs⁹ that follow the day *ymix* in the table of twenty Yucatec days. My first thought, seeing in one extreme of the manuscript a series of days beginning with the first of the indigenous computation, and continuing without interruption with the signs of the following days, is to think that this Maya document will furnish us with all the cyclic signs that are known to us and in the order they should have in an almanac. It suffices to turn the page to be compelled to renounce this illusion. After the seventh day, the *Codex Troano* does not give the eighth, and it is in vain that we search through all the manuscript for a continuation of the series interrupted in the second page.

Now, what do we find in the subsequent pages of this enigmatic document? From then on, a more continuous series of day signs, but here and there, in diverse places in the pages, one or more columns of cyclic signs showing, among them, more or less considerable lacunae.

In the presence of such notations of cyclic signs, where discontinuity destroyed the initial idea I had conceived of a continuous enumeration of the days of a given period, I have investigated whether any principle presided over the notation of these signs. An attentive examination of certain pages of *Codex Troano*, and later, the study of the other Maya manuscripts, has demonstrated to me that these signs, while not following without interruption, are always annotated following an order, or if you prefer, following a rigorously mathematical progression. No sooner do they appear separated from one another by 5 than they appear separated by 13, then by 7, etc.

The confirmation of this regular numerical disposition gives me a valuable line of investigation, and allows me not only to establish with certainty some regrettable lacunae and signs destroyed partially or totally, but even to determine in a rigorous way the value of a whole series of variants, and to know, in consequence, the significance of many signs not mentioned by Diego de Landa.

[pp. 43–44]

The first question to resolve, if one wishes to attempt the decipherment of a text drafted in an unknown language, is, I think, to establish the language or at least the language family of which it is a part. It is known that Alexander von Humboldt, Kingsborough, our learned Mexicanist M. Aubin himself, and many other scholars or collectors,¹⁰ have assigned the hieratic manuscripts that concern us to the class of *Mexican* documents, and have contested their character as texts written in a veritably phonetic script. Truly, the idea was expressed several times in the sessions of the Société Américaine de France that these manuscripts were composed in a language of the Isthmian region, and several times also *Maya* was designated as probably having been such a language. However, since this idea was enunciated with no proof in its support,¹¹ and with no relation to systematic work on the most important literature of ancient America, it could not hope to prove its case. It was not until 1863, when Brasseur de Bourbourg had the good fortune to find a copy of Diego de Landa's *Relación* in Spain, that the application of Maya to the decipherment of the Katunic writing of Central America could be undertaken in a serious manner.

[pp. 46–47]

The Maya language is, among all these languages more-or-less closely related to each other, the one that seems to correspond best to the language of a great center of civilization.¹² It would be at least hazardous to insist that it was the only language written with the hieratic characters that concern us, especially because the evidence testifies to the use of writing in almost all the Isthmian region.¹³ In addition, while we possess but a few rare manuscripts from Central America, it is easy to detect, while examining them, at least two different styles of writing. The first style is that of *Codex Troano*, *Codex Cortesianus*, and even *Codex Peresianus*, while the latter already displays some graphic differences from the first two; the second style is that of *Codex Dresdensis*.

I do not ignore the fact that the *Codex Peresianus* has been termed a “Guatemalan manuscript,” but I have not been able to discover what could have motivated this label. Hence, until I am better informed, I will admit but the two varieties I have just indicated in the hieratic manuscripts we possess.

Progress in the decipherment of the Katuns will by itself show us a way to a secure determination of the linguistic character of these manuscripts. Meanwhile, I believe I have recognized that the language, of which Maya is the modern and altered type, is also that of the three manuscripts of the first style; this notion accords with most archaeological views, which, until now, are unanimous¹⁴ in believing that Maya is the language of all the Katunic texts of Central America. However, I differ in one respect, in the sense that I consider the language of the hieratic manuscripts of the first style as markedly different from the Yucatec language described in the grammars of Fathers Gabriel, Beltrán, Ruz, and the vocabulary of Abbé Brasseur. In other words, there is a difference between modern Maya and the language of the Katunic manuscripts, analogous to that which separates Persian, not from Sanskrit, but from the Persian of *Ferdaousi*, Assyrian from biblical Hebrew. In order to avoid misunderstandings, it seems useful to give a name to this language that is still hypothetical, as has been the case for the Aryan language, the prototype of Sanskrit and of the Indo-European languages. I would propose *Itzaic*, borrowed from one of the most ancient nations of Yucatan.¹⁵

As for the language of the manuscript of the second style, the future progress of the decipherment of the Katuns should be awaited before we venture any hypotheses in this regard. And for the moment we should limit ourselves to establishing the first indices of this *Itzaic language* on which will rest our future tentative approaches to decipherment.

[pp. 48–49]

This first page [of *Codex Troano*] presents, in addition, at the beginning of the second line, the four groups of signs that follow:



Now, these four signs appear, in opposition to each other, in several hieratic texts, where they seem to represent the four cardinal points, places of adoration of the four Bacabs, and probably at the same time of the four seasons. I am not in possession of decipherments that offer an absolute certainty, but I believe in the probability of my interpretation.

The first of these signs seems to represent the East (Maya: *lakin* or *likein*, for *lik-kin* "rising sun"), and the Spring or the beginning of Autumn. In this composition, the sign  *kin* "sun," is recognized. As for the upper sign, it is read *ahau*, so that the whole group would form the word "Lord-Sun." And we know from Landa that *Kinich-ahau* or "the lord of the eye of the sun" was precisely the one adored in the years beginning with the day *muluc*,  a sign that is, in turn, the symbol of the East. Thus, this first interpretation is sure enough.

The second sign, composed of the emblem of fecundity *yax*, would occupy, in this series, the place of the South, of which the cyclic symbol is  *kan*.

The third sign, representing the West (Maya: *oc-na-kin*, or *chi-kin*), comprises the sign  *kin*, in its lower part. The cyclic symbol of the West is *cauac* .

Finally, the fourth sign, representing the North (Maya: *xaman*, *xamin*), has as its cyclic symbol .

[pp. 53–56]

One might have believed, at the moment of the discovery in Spain of the *Relación de las Cosas de Yucatán*, that, with the aid of the hieratic alphabet enclosed in that book, the decipherment of the manuscripts and inscriptions would not give us any more difficulties. Americanists have been rapidly disillusioned in this respect, and the audacious Brasseur de Bourbourg has been the only one that has dared to throw himself fully into an interpretation of the sacred texts with such an insufficient, such a defective working instrument. He has been severely punished for his temerity with the indifference or energetic critiques of the learned world, through which his incredible fantasies have led some to diminish the unquestionable services he has rendered to Yucatec epigraphy.

The fact is that *until now, Landa's alphabet has not allowed us to read in a serious way a single word written in a hieratic Maya character*. The Maya alphabetic letters that Landa gives us are found—most of them at least—here and there in the three manuscripts we know, but never, to my knowledge, isolated from the signs of days or other unknown signs, and never in the conditions of absolute phoneticism of which the bishop of Yucatan furnishes an example, citing the words *ma in ka-ti* "I do not want." Therefore, we will investigate whether Landa's alphabet is really the hieratic Maya alphabet, or just a part of that alphabet, and then to what extent we should accept the value given as being that of the sign it comprises.

If one refers exclusively to the evidence mentioned in the Diego de Landa's *Relación*, Maya hieratic writing would be neither a figurative writing such as that of the ancient Mexicans, nor a figurative and ideographic writing such as that of the ancient Egyptians and Chinese, nor as well a syllabic writing such as that of the Assyrians, Sumerians, or Japanese, but a nearly completely alphabetic writing and almost more simple and analytic

than that of the Indians, Greeks, and Romans. In effect, besides the syllables *ca*, *cu*, *ma*, *ha*, and *ti*, Father Landa does not cite in his alphabet anything other than letter signs and consonants isolated from any inherent vowel. Following the missionary,  is equivalent to our *b*,  to our *l*,  to our *n*, and if  corresponds to the syllable *cu*,  represents *c* to the exclusion of any inherent vowel.

A somewhat attentive study of Landa's alphabet leads without delay to the following conclusion: does the alphabet in question contain the elements of the hieratic script of the ancient manuscripts we possess, or *is this alphabet given in an inexact and at the same time incomplete way?*

The first of these two hypotheses is not admissible. It is in fact possible that since the establishment of the Spaniards in Yucatan and as a result of their religious preaching, the Indians modified under their influence the ancient system of their writing, as they modified the system of their numeration¹⁶ and even their historic and religious traditions.¹⁷ To make easier the composition of Christian books, they extracted from their ancient characters the elements of an alphabet, which therefore would be the one offered by the *Relación*. It is known that the Spaniards, since their first steps in Mexico, understood the utility of using the figurative script in their contacts with the Indians;¹⁸ and that for translating more easily their ideas and the foreign words they brought, they did not hesitate to subject that writing to profound modifications.¹⁹ The same thing happened in the Isthmian region.

The second hypothesis related to the inexactness of Landa's alphabet, if one accepts the first, becomes evident from the study of the Katunic manuscripts we possess. Only with effort can one find in all these manuscripts three or four groups showing exclusively the signs explained in the *Relación*; if one tries to read such groups *following the clues of Landa*, *one does not come to form any word known in the Maya language*, I would say almost no word having the slightest Yucatec physiognomy. Instead, one finds there a multiplicity of groups composed of characters that remain absolutely unknown. Should one suppose that these unknown characters are variants of the letters of Landa's alphabet, or representations of letters missed in that alphabet? We will see shortly what should be thought in this regard.

In the meantime, let us remark that the examination of the hieratic manuscripts should not be confined to the "alphabetism" of the Maya characters, as should be done if one relies only on the bishop of Mérida. One example, among several others, will suffice to make my thinking understood:

In diverse passages of the *Codex Troano*, we find isolated signs that, according to Landa, would represent consonants, especially  *b*,  *m* (??), etc.²⁰ Now, these signs are not abstract consonants that cannot be pronounced, but at least syllables composed of consonants and vowels.

The few cases of syllabism in Katunic writing, indicated by Landa, *ca*, *ku*, *cu*, *ha*, *ti*, are not therefore the only ones that we could find in this script, and we should consider the phonetic Katuns as syllabic signs, and not as purely alphabetical signs, as the *Relación* has made Americanists believe.

However, I do not believe that one would be justified in admitting the syllabism of all the Katunic signs, or the mixed system expounded by Landa. I think new particularities of this hieratic script should be sought before attempting its decipherment.

CONCLUSION

The long experience I have acquired studying the writing systems of China, Japan, Egypt, Assyria and Mexico and the thorough examination I have made of the known Katunic texts—of which I have annotated in charts all the formulae and the inventory of signs they comprise—have led me to pose the following conclusions on the subject of the Yucatec hieratic writing.²¹ This script is composed of:

- 1) *figurative signs*, expressing the object of which they furnish a more-or-less exact representation, more or less abbreviated.
- 2) *ideographic signs*, expressing certain words or certain derived and conventional ideas. To these signs should be probably added the Katuns with combined sense, that is to say, those whose significance comes from the association of several ideas represented in a figurative manner.
- 3) *phonetic signs*, indicating a sound derived from that of the image their represent.

Figurative Signs. —Figurative signs are pure and simple images of the objects they represent in the hieroglyphic script. These images are somewhat altered in hieratic writing, where they acquire an abbreviated form, and a relatively rapid and easy drawing. Example:



cay, “the fish”;



ikilcab, “the bee”;



kak, “the fire”;



xicin, “the ear”;



uxcil, “the vulture”;



tzem, “the breast.”

Ideographic Signs. —The ideographic signs whose meaning has been discovered so far are almost exclusively numerical signs. I have had occasion to mention them several times in the present essay and in a report I have devoted to the manner of counting in the language and writing of the ancient Mayas.²² The following signs could equally be arranged in that class:



“water,” cited by Landa, but which has not been found in the known manuscripts:



ma “negation.”



“road” (footstep).

Phonetic Signs. —I have explained the reasons that compel me not to admit, in the ancient²³ Katunic writing, the existence of purely alphabetical letters, such as those of

which we owe a list to Diego de Landa. In compensation, I consider as certain fact that a good number of Yucatec characters, figurative or ideographic, could be employed as phonetic signs. For example:



ikilcab "a bee";



zatzah "to destroy";



yaxcab "sunrise."

It still remains to point out two particularities that I believe I have recognized in the system of Katunic writing. I wish to talk about *specific determinatives* and of *polyphony* respectively in a certain number of figurative or ideographic characters.

Specific Determinants. —I have noted a passage in Landa's *Relación* that seems to have particular importance, but whose obscurity is very regrettable. It is the section where Landa deals with the "joint part." This "joint part" alludes, according to me, to specific determinants that make clear which class of objects are referred to by words recorded in phonetic signs,²⁴ especially those that by reason of homophones or for other reasons could leave some uncertainty about their significance.

While making the inventory of signs and groups of signs comprised in hieratic Maya texts, I have acquired proof of the existence of specific determinants.

For example, we find in *Codex Troano*, on page 24, compartment c, an image representing a personage striking a tree trunk with a cutting instrument of the following form



. This image is surmounted by the explanatory legend



in which the determinant "cutting instrument"²⁵ is very clearly reproduced, leaving no uncertainty about its graphic role. In the same manuscript, on page 22, compartment d, above a group showing a personage placed in front of an animal in an



attitude of veneration, I find the legend where the determinant is no less easily recognized.

Polyphony. —Figurative or ideographic signs that can be read or pronounced in several different ways are categorized as "polyphonic characters." Polyphony exists in many other writing systems, notably in ancient cuneiform writing and in the script now used by the Japanese. If we made use of images to write, we could have in that way a more-or-less exact, more-or-less conventional tracing representing the idea "horse"; in that case, this sign would be read "horse, mare, colt," etc. The Katunic sign , for example, is read *ymix* when it designates the initial sign of the Yucatec calendar; but when it represents a breast, it would correspond to the word *izem* in the spoken language; , read *caban*, as "name of day," would be pronounced *cab* in words such as *cab*, "earth," *yaxcab*, "dawn," *ikilcab*, "bee," *nemazcab*, "axe," etc.

It should be understood that there remain many problems: the small number of initial clues; the absence of any bilingual text; along with the most deplorable uncertainties surrounding what we are able to know of the value of the images comprised in the Yucatec inscriptions and manuscripts. Accordingly, attempts to interpret words recorded in hieratic signs are much more tentative than have been the first attempts at decipherment of the unknown scripts of ancient Egypt and Assyria. During the course of the long and painful researches I have undertaken over the last few several years in the hieratic writing of Central America, I have found many groups that appear to me amenable to interpretation, but the means of control have always seemed insufficient. For that reason, I have preferred not to give tentative readings here that I cannot consider as definitively acquired for palaeographic science. These tentative decipherments, for which I will call for a severe examination by authorized scholars, will find a better place in special notes I shall prepare in the near future. Thus, I will end this essay by emphasizing again the point made throughout this report: namely, that with the exception of the case where new working tools are discovered, the only method that can produce enduring results consists of enlarging the series of signs and variants or known signs, but without falling into the premature temptation of reading proper nouns or translating complete phrases. I have found this method to be of a hardly encouraging slowness, but I think it is preferable to enrich erudition with a small number of sure and certain facts, as insignificant as they might appear, than to give oneself the vain pleasure of pompously publishing results that are considerable in appearance, but condemned to disappear at the first signs of criticism.

NOTES

1. See my reservations, in this respect, in the *Mémoires du Congrès International des Orientalistes*, London session, 1874, p. 129.

2. Lizana, *apud* Brasseur, *Manuscrit Troano*, vol. 2, p. 267.

3. Landa, *Relación*, p. 317; Bancroft, *Native Races of the Pacific States of North America*, vol. 2, p. 768.

4. M. Dr. Förstemann writes to tell me that he is trying to publish a photographic facsimile of this precious manuscript. Such a publication would be very useful to studies of Yucatec archaeology.

5. "The passage relating to the alphabet is very vague, unsatisfactory, and perhaps fragmentary" (Bancroft, *Native Races of the Pacific States of North America*, vol. 2, p. 777).

6. *Relation des choses de Yucatan*, Introduction, p. 3, n.

7. I had first thought to add a catalog of these signs to my report. Eventually, I decided otherwise, both because of the typographic difficulties inherent in their reproduction and because I have acquired the conviction that I cannot publish such a catalog in a satisfactory way before having studied the *original* of the magnificent Maya manuscript of the Dresden Library. [This estimate of 700 signs is close to Eric Thompson's. (Editors' note)]

8. *Relation des choses du Yucatan*, pp. 236–237.

9. The manuscript is very deteriorated in this part, but I have been able to reconstruct this whole line in an absolutely uncontestable way, as will be seen in the following parts of this essay.

10. Alexandre de Humboldt, *Sites des Cordillères*, 1869 edition, p. 380; Kingsborough, *Antiquities of Mexico*, vol. 3; Aubin, in the *Archives de la Société Américaine de France*, 1st Series, vol. 4, p. 279; Nott and Gliddon, *Types of Mankind*, pp. 294, 383; E. Dally, *Sur les races indigènes et sur l'archéologie du Mexique*, p. 33; J. Crawford, *Transactions of the Ethnological Society of London*, New Series, vol. 1, p. 98; Waldeck, unpublished MS, in the *Documents relatifs à l'archéologie, à l'histoire, à la paléographie, à la linguistique, etc., de l'Amérique ancienne* (Lucien de Rosny Collection, No. 1); Stephens, *Incidents of Travels in Central America*, vol. 2, p. 455. See also, on the Dresden manuscript, Götz, *Denkwürdigkeiten der Dresdner Bibliothek, erste Sammlung* (1744), p. 4.

11. Nevertheless, since that time, the attentive study of old Spanish authors has furnished priceless evidence (see especially López de Cogolludo, *Historia de Yucatán*, p. 185). And Brasseur himself seems to have forgotten an idea he expressed in his youth: "the Maya, still spoken by the Indians, the inhabitants of Yucatan, those of the district of Peten and the Eastern part of Tabasco, is truly the language of the people of Palenque, or it might well be the Puctunc, a corrupted language spoken to the Southwest, towards the Pacific ocean." Brasseur de Bourbourg, *Quelques faits et découvertes que tendent à prouver l'ancienne civilisation de l'Amérique*, unpublished MS in the *Documents relatifs à l'archéologie de l'Amérique ancienne* (Lucien de Rosny Collection, No. 1).

12. Following Gallatin, Maya would have been the only language spoken in Yucatan, and it was equally spoken in Tabasco, as proved by the fact that Doña Marina, for several years prisoner in the latter locality, could translate into Mexican, her mother language, the words that Fernando Cortés made interpreted in Maya by de Aguilar ("Notes on the Semi-civilized Nations of Mexico, Yucatan and Central America," in the *Transactions of the American Ethnological Society*, 1845, vol. 1, p. 4).

13. Clavigero, cited by Pimentel, *Cuadro descriptivo de las lenguas indígenas de Mexico*, vol. 2, p. 232; Stephens, *Incidents of Travels in Central America*, vol. 2, p. 455; Bollaert, in the *Trans. of the Ethn. Soc. of London*, New Series, vol. 2, pp. 150, 155, 158. Figurative paintings appear all the way to Peru (García, *Orígen de los indios del Nuevo Mundo*, p. 442). But besides the figurative painting and writing, traces of rude images are also found in almost all parts of America. These are the product of primitive populations or populations relapsed into barbarity. (Möllhausen, *A Journey from the Mississippi to the Coasts of the Pacific*, trans. by Mrs Percy Sinnett, vol. 2, p. 72; Kalm, *Travels in North-America*, p. 123; D. Diego Andrés Rocha, *Tratado único y singular del orígen de los Indios Occidentales del Perú, México, Santa-Fé y Chile*. Lima, 1681, page 25 v°).

14. Besides the opinion of modern Americanists, see López de Cogolludo, *Historia de Yucatán*, p. 185.

15. "This name refers to the most ancient origins of Yucatan, and is found in the latter place with the riverine populations of the lake of Chaltuná, in Peten." Brasseur de Bourbourg, *Études sur le système graphique et la langue des Mayas*, vol. 2, p. 256.

16. See my *Mémoire sur la numération dans la langue et dans l'écriture sacrée des anciens Mayas*, p. 7.

17. The Indians amalgamated the Catholic cult with that of their ancient gods, and they addressed to Christian images the prayers they anciently used to address their idols; they assimilated the passion of Jesus Christ to the sanguinary apotheosis of their human victims, etc. See Evar. Escalera and Manuel Gonzales Llana, *Historia y descripción de Méjico*, Madrid, 1864, p. 287.

18. Hernán Cortés had knowledge of the Mexican system of figurative writing as early as 1519, that is, when he arrived in the land of New Spain (Robertson, *Histoire de l'Amérique*,

trans. Suard and Morellet, vol. 2, p. 153), and he did not delay in using it in the interest of his ambitious designs.

Father Motolinía wrote, in 1537, that, following Lent, there were at the town of Cholollan, a great pueblo in the environs of the city of the Angels, so many Indians who came to confess that he consented to admit to his tribunal only those that brought "their sins written and in images" (Fr. Toribio Motolinía, *Historia de los indios de la Nueva-España*, in Joaquín García Icazbalceta, *Colección de documentos para la historia de México*, vol. 1, p. 122). See also, on the use of Mexican painting by the Spaniards, Torquemada, *Monarchia indiana*, book XIX, ch. 1, 2, 13 *et pass.*; Gonzaga, *De origine seraphicæ religionis*, p. 1221; Sahagún, *Histor. universal de las cosas de Nueva-España*, in Kingsborough, *Antiquities of Mexico*, vol. 7; and the critical observations of M. Madier de Montjau, in *Annuaire de la Société Américaine de France*, 1875, p. 125 *et pass.*

19. One can cite, among the examples of modifications of Mexican figurative writing, the fragmentary *pater* of the Metropolitan Library of Mexico (Aubin, *Essai sur la langue mexicaine*, in *Archives de la Société Américaine de France*, New Series, vol. 1, p. 349).

20. *Codex Troano* 14x, 10a.

21. The printing of this *Essay*, of which the typographic composition was almost finished by the end of 1879, was interrupted in the middle of the following year. Knowing that the *Codex Cortesianus* had been acquired by the Spanish government, I considered it my duty to see it before finishing the present work. In several forthcoming publications, I will render an account of the new facts I have acquired by studying the precious document deposited in the Archaeological Museum of Madrid; but I also felt that these facts could not find a place here without modifying considerably the original plan of my work, and I resolved to finish it by introducing only slight changes in my original work.

22. In the *Mémoires du Congrès international des Américanistes*, first session, Nancy, 1875, vol. 2.

23. I propose to demonstrate, in a special report, that Diego de Landa's alphabet, which an American scholar, M. Dr. Ph. Valentini, has characterized as "a Spanish fabrication" (*The Landa Alphabet, a Spanish Fabrication*, in *Proceedings of the American Antiquarian Society*, Worcester, Mass., 1880), and whose authenticity he contests with an extreme severity, was in reality an alphabet in use; but that this alphabet, invented for teaching the principles of Christianity to the Indians, represented a completely different graphic system than the *ancient* Katunic script. I will establish, finally, that this Maya Christian writing derived from hieratic writing, with the purpose of being easily learned by the Indians of Yucatan, and with the purpose of placing before their eyes something of the sacred character of the Katunic signs of which their ancestors made use; and that it was transformed into a partly alphabetic writing to approach the European system and render as easy as possible the transcription of religious terms that the missionaries of the gospel preferred to note phonetically rather than rendering them in an approximate equivalent in translating them to the Maya language.—May 28, 1882.

24. Determinants of this class have been confirmed in all figurative and ideographic scripts. In Egyptian hieroglyphic writing, "X" is the determinant for "trees," "Y" is that of "buildings," "Z" is that of "mischievous or harmful things," etc.; in cuneiform writing, other signs are determinants for "country," another still for "villages." Chinese keys can equally be considered as specific determinants, including those for "women," "birds," "plants," etc., etc. [Graphic examples of each determinant are omitted from this note. (Editors' note)]

25. A footnote commenting on Egyptian, Assyrian, and Chinese analogs for this sign has been omitted. [Editors' note]

A Primer of Mayan Hieroglyphics

Daniel G. Brinton

When Brinton published his book on ancient Maya writing (1895), literature on the subject was already extensive enough to justify its label as a "primer." The amount of glyphic material available for study had increased considerably: the three known codices were fully published, and the monumental volumes containing A. P. Maudslay's photographs and Annie Hunter's drawings had started to appear (Maudslay 1889–1902). In 1891, Harvard University initiated the first modern field project designed to explore systematically the remains of a Maya city (at Copan), and, more to the point, E. P. Förstemann and others had elucidated crucial aspects of the Maya calendar and notational system. As a result, a large portion of Brinton's book concerned itself with calendrical matters. As for noncalendrical texts, Brinton departed from earlier efforts at phonetic decipherment, emphasizing instead the possibilities offered by the rebus principle. In both emphases—the calendar and rebus—Brinton foreshadowed trends that would dominate epigraphic studies in the first half of the twentieth century.

Of Quaker origin and a native of Pennsylvania, Brinton took his B.A. at Yale University and studied medicine at Paris, Heidelberg, and Jefferson Medical College, where he obtained a medical degree in 1860 (Darnell 1988: 4). He practiced his profession during the Civil War (suffering sunstroke during active duty at Gettysburg), but afterward devoted himself to the study of Native American languages and history, becoming, along with Lewis Henry Morgan and John Wesley Powell, one of the founders of American anthropology, with studies devoted to shell-midden archaeology, physical anthropology, nauticalism, and the Walam Olum, a migration myth of the Delaware as controversial and emotive as Ossian was to the Scots (Williams 1991: 108, 114); other interests included literary criticism, for Brinton was fond of the Romantic poets and profoundly humanistic in orientation (Darnell 1988: 13). During his second career as a scholar, he taught archaeology and ethnology at the Academy of Natural Sciences in Philadelphia and archaeology and linguistics at the University of Pennsylvania, where he was "technically the first professor of anthropology in North America" (Darnell 1988: 50). Later criticized by Franz Boas for his notions of "psychic unity"—a faith in the "oneness of the human spirit" as an explanation for cultural similarities—Brinton lacked the programmatic influence and love of fieldwork that characterized the research of a succeeding generation of anthropologists (Darnell 1988: 21, 72).

Written in 1895 by Daniel G. Brinton (1837–98). Excerpted from Brinton 1895.

I. INTRODUCTORY

The explorations among the ruined cities of Central America undertaken of late years by various individuals and institutions in the United States and Europe, and the important collections of casts, tracings and photographs from those sites now on view in many of the great museums of the world, are sure to stimulate inquiry into the meaning of the hieroglyphs which constitute so striking a feature on these monuments.

Within the last decade decided advances have been made toward an interpretation of this curious writing; but the results of such studies are widely scattered and not readily accessible to American students. For these reasons I propose, in the present essay, to sum up briefly what seem to me to be the most solid gains in this direction; and to add from my own studies additional suggestions toward the decipherment of these unique records of aboriginal American civilization.

1. GENERAL CHARACTER OF MAYAN HIEROGLYPHICS

One and the same hieroglyphic system is found on remains from Yucatan, Tabasco, Chiapas, Guatemala, and Western Honduras; in other words, in all Central American regions occupied at the Conquest by tribes of the Mayan linguistic stock.¹ It has not been shown to prevail among the Huastecan branch of that stock, which occupied the valley of the river Panuco, north of Vera Cruz; and, on the other hand, it has not been discovered among the remains of any tribe not of Mayan affinities. The Mexican manuscripts offer, indeed, a valuable ancillary study. They present analogies and reveal the early form of many conventionalized figures; but to take them as interpreters of Mayan graphography, as many have done, is a fatal error of method. In general character and appearance the Mayan is markedly different from the Mexican writing, presenting a much more developed style and method.

Although the graphic elements preserved in the manuscripts and on the monuments vary considerably among themselves, these divergencies are not so great but that a primitive identity of elements is demonstrable in them all. The characters engraved on stone or wood, or painted on paper or pottery, differ only as we might expect from the variation in the material or the period, and in the skill or fancy of the artist.

The simple elements of the writing are not exceedingly numerous. There seems an endless variety in the glyphs or characters; but this is because they are composite in formation, made up of a number of radicals, variously arranged; as with the twenty-six letters of our alphabet we form thousands of words of diverse significations. If we positively knew the meaning or meanings (for, like words, they often have several different meanings) of a hundred or so of these simple elements, none of the inscriptions could conceal any longer from us the general tenor of its contents.²

It will readily be understood that the composite characters may be indefinitely numerous. Mr. Holden found that in all the monuments portrayed in Stephen's *Travels*

in *Central America* there are about fifteen hundred;³ and Mr. Maudslay has informed me that according to his estimate there are in the Dresden Codex about seven hundred.

Each separate group of characters is called a "glyph," or, by the French writers, a "katun," the latter a Maya word applied to objects arranged in rows, as soldiers, letters, years, cycles, etc. As the glyphs often have rounded outlines, like the cross-section of a pebble, the Mayan script has been sometimes called "calculiform writing" (Latin, *calculus*, a pebble).

[p. 17]

A slight inspection of the Maya manuscripts and of almost any of the inscriptions will satisfy the observer that they are made up of three classes of objects or elements:

1. Arithmetical signs, numerals, and numerical computations,
2. Pictures or figures of men, animals, or fantastic beings, of ceremonies or transactions, and of objects of art or utility; and,
3. Simple or composite characters, plainly intended for graphic elements according to some system for the preservation of knowledge.

I shall refer to these as, "(1) the Mathematical Elements, (2) the Pictorial Elements, and (3) the Graphic Elements of the Mayan hieroglyphic writing."

[p. 78]

Having made this satisfactory progress in explaining the numeral and the pictorial portions of the Codices, we are well prepared to approach the more difficult part of our task, the interpretations of the hieroglyphs themselves.

Fortunately, an even superficial inspection of the manuscripts shows us that we are not without material aids to this end. It is clear that many of the hieroglyphs are those of the twenty days and the eighteen months of the Maya year, which are preserved to us in the work of Bishop Landa; others, again, by their arrangement, must be connected with the cardinal points; and others suggest, by their appearance and disposition, that they portray the celestial bodies, the sun, moon, and stars; others are in the columns of numerals, and must have numerical values; and others are so related to the pictures that they are plainly a repetition of them in a partial and conventional manner, as the written characters for divinities, which are usually merely the head of the divinity more or less cursively expressed.

[p. 81]

2. COMPOSITION OF THE GLYPHS

I have already stated, p. 10, that the main elements of the Mayan hieroglyphic writing are not numerous. The apparent complexity of many of the glyphs arises from

the combination of a number of frequently recurring elements which are placed in different positions and relations, and each of which has many variant forms, dependent on the degree of skill or care of the scribe or sculptor, and the material which he used for the record.

Usually each glyph or katun consists of one main element with a number of others drawn in or around it, which are generally known as "affixes." An element within another is called an "infix"; placed in front of it, a "prefix"; and below it, a "suffix." The same element will often be found first in one and then in another of these positions; and a certain class of elements are employed as affixes only. I shall refer to the single elements as "simple characters," and to the complex glyphs as "composite characters."

3. THE PROPER METHOD OF STUDYING THE GLYPHS

The proper method to adopt in studying composite characters is first carefully to separate them into the simple characters of which they are composed, noting the relative positions of these.

The next step is vitally important and often most difficult. It is to determine what visible objects these simple characters were intended to represent. They are often so conventionalized or so negligently sketched that the most careful students have reached absurdly different opinions as to what they were designed to portray.⁴

This identification accomplished, the student should proceed to ascertain the name of the object in the Maya language; because though it may be employed as pure ideogram in one connection, in another it may be used for its phonetic value according to the "ikonomatic," or rebus method, as I have above explained, and instances of which I give in these pages. I do not believe that a further phonetic analysis—that to the isolation of distinct alphabetic elements—as has been pursued by a number of writers already referred to, is justified by the nature of the Maya script, or will yield useful results.

[pp. 140–41]

The limits which I have prescribed for this work do not permit me to add further comparisons in Mayan palæography. Fortunately, the student can find ready access to abundant examples. The inscriptions of Copan and Quirigua, of Chichen Itza, and Palenque, are or will be represented with admirable fidelity in Mr. Maudslay's work already referred to; others from Tikal have been made accessible by the labors of Berendt, Charnay and de Rosny; and we are justified in believing that before many years the intelligent explorations of competent archæologists will add hundreds of texts from the relics in stone, clay, and wood which still exist to attest the character of ancient Mayan literature.

The most urgent duty resting upon the present generation of students interested in this subject is to collect and accurately reproduce as many of these texts as possible, before they are destroyed or lost. Extended comparisons will ultimately reveal their meaning, as will readily be seen from the advances in that direction chronicled in the preceding pages.

NOTES

1. In accordance with usage in this study, I employ the adjective "Mayan" when speaking of the whole stock, and confine "Maya," in an adjectival sense, to that branch of the stock resident in Yucatan.

2. This is also the opinion of Dr. Seler: "Es ist eine verhältnissmässig geringe Zahl von Bildern und Grundelementen, die in diesen Schriftzeichen wiederkehren." *Verhand. Berliner Anthropol. Gesell.*, 1887, S. 231 [Seler 1887: 231].

3. "Studies in Central American Picture Writing," in *First An. Rep. of the Bureau of Ethnology*, p. 210 [Holden 1881: 210].

4. In this connection I would call the especial attention of students to the article by Dr. Schellhas, "Vergleichende Studien auf dem Felde der Maya-Alterthümer," in the *Internationales Archiv für Ethnographie*, 1890. He there illustrates their methods of tattooing, wearing the hair, personal ornaments, costumes, utensils, etc., as shown in the Codices and other remains.

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Part Two

The Nature of Maya Writing

Victoria Bricker (1986b: 1) distinguishes four distinct but functionally overlapping features of Maya writing: semantic, syntactic, morphological, and phonetic. The semantic level—the content of the inscriptions—was not controversial until the end of the nineteenth century. Hypotheses on this level ranged variously from history to religious, calendrical, and astronomical matters, with little evidence of extreme, unyielding positions. In contrast, the structure and degree of phoneticism of the system—features directly relevant to decipherment—created heated debate from an early date.

With few exceptions, epigraphers have always recognized that the script should have some linguistic basis. The problem for early researchers lay in determining which kinds of linguistic units were represented by particular signs and how closely the script resembled spoken language. A related question was the utility of Landa's alphabet for deciphering the script. The failure of early interpreters to recognize Landa's signs as syllables led to its progressive rejection as a reliable key. This was usually coupled with the tendency to characterize Maya writing as either pictographic or word-based.

In rereading Léon de Rosny's statements, one wonders why his essentially valid ideas about the mixed nature of Maya writing—he hinted at its syllabic qualities—were not seriously addressed by contemporaries. Other researchers sought a characterization of glyphs that would account for most, if not all, Maya characters in terms of ideal types, such as "pictographic," "ideographic," or "phonetic" signs. These terms implicitly convey evolutionary notions about the level of Maya civilization, views that might explain the reluctance of some authors to accept phoneticism among the Maya. Yet, to some extent, such reluctance is understandable. Early phonetic attempts, such as Cyrus Thomas', failed to produce consistent, reproducible results in a wide range of inscriptions. Their dismissal was hastened by the emergence of alternative approaches, especially the mathematical and astronomical enquiries pioneered by Ernst Förstemann; these surpassed current phonetic attempts in their clarity and consistency of results. The structural analysis of repetitive glyphic and iconographic patterns in the codices further advanced epigraphy, but in ways that led away from studies of phoneticism. Such research is exemplified by Rosny's identification of the world direction glyphs and Paul Schellhas' (1897) isolation of the name glyphs of deities in the codices. Scholars working along these lines did not necessarily reject linguistic explanations, but they usually went no further than reading a few words, tacitly or explicitly accepting a pictographic or ideographic view of the system. Selser clearly favored such

interpretations, and his polemic with Cyrus Thomas illustrates the strengths and weaknesses of both approaches at this early stage of decipherment.

Förstemann and Seler would be the most important influences on J. Eric S. Thompson, the main authority on Maya writing for a good part of the twentieth century, who also made use of the rebus principle propounded by Brinton. While advances were made by Thompson and others, little progress took place in understanding the linguistic properties of Maya script; Benjamin Lee Whorf's unsuccessful efforts seem to have discredited such interest in the language behind the glyphs.

The real breakthrough would come after 1955, with the work of Yuri Knorosov, whose background in comparative linguistics and writing systems opened new perspectives. Knorosov's general proposals have slowly gained ground, in spite of the strong criticism of Thompson and other scholars. Recent decades have witnessed an extensive acceptance of Knorosov's principles, which have also proved fully compatible with the historic interpretations of Tatiana Proskouriakoff and Heinrich Berlin; even so, many of Knorosov's decipherments have not survived the test of time, a weakness most evident in his work after 1960. But the advances are real. At present, virtually all researchers recognize logographic and syllabic signs in the script, and underlying linguistic patterns are coming into clear focus. We believe that most aspects of glyphic grammar will be understood within the next ten years.

“‘The Landa Alphabet’: A Spanish Fabrication”

Philipp Johann Joseph Valentini

One of the earliest and most influential critiques of Landa's alphabet as a phonetic key to ancient Maya writing came from Philipp J. J. Valentini, born in Berlin to a German mother and an Italian father, who was serving at the time as a tutor to the royal court of Prussia. After studying and practicing law for several years, Valentini left Germany for Costa Rica (1854), where he helped found Puerto Limón and began to develop an interest in the Spanish colonization of Central America. In 1858, he returned to Germany, where he obtained a Ph.D. from the University of Jena. His dissertation dealt with the early history of Costa Rica, and in this, apparently, Valentini was much influenced by his father's intimate friend Alexander von Humboldt (1769–1859). From 1861 to 1871, Valentini once again worked in Costa Rica as a coffee planter, but set aside time to travel widely in Central America. He moved to New York City in 1871 and remained there until his death in 1899. His pedagogical experience seems to have been restricted to a single year (1879) spent as a language instructor in the School of Mines at Columbia University (Gatschet 1899: 391–94).

Valentini's writings on Middle American antiquity encompass Mexican, Maya, and Central American topics. Of his contributions to Maya epigraphy (Valentini 1880a, 1880b, 1893, 1894–95), the most important is the critique of Landa's alphabet that we excerpt here. Reacting against the early phonetic decipherments of Brasseur and others, and completely convinced that Maya writing was essentially similar to the Central Mexican system, Valentini argued that Landa's alphabet resulted from a process similar to the graphic adaptation of Mexican symbols for Spanish words (see Galarza 1980)—an idea that had previously been considered and discarded by Rosny.

Valentini's writing reflects unwarranted stereotypes and prejudices about the early Colonial Maya. There is no question that he expounded his arguments forcefully and coherently, a quality that surely contributed to the influence of his opinion in later considerations of the Landa alphabet. J. E. S. Thompson's (1950: 46, 1953) interpretation of the bishop's assertions closely followed that of Valentini, and, even today, Valentini's arguments have provoked reaction, as evidenced by the critical remarks of at least one historian of Maya epigraphy (M. Coe 1992: 119–20).

Written in 1880 by Philipp Johann Joseph Valentini (1824–99). Excerpted from Valentini 1880a.

Valentini may not have seen much of value in Landa's alphabet, but he did contribute inadvertently to the modern understanding of that key. He showed that such signs could be explained through reference to words in Yucatec Maya—a notion especially relevant to the letters A, B, and N. Yet his basic assumptions prevented him from considering a second possibility: that these symbols corresponded to the sounds of monosyllabic words. The following excerpt provides a good sample of his vigorous style.

[pp. 60–64]

For myself, I may say, that my sympathies were with the doubters from the very outset. My study of the writers on the Spanish Conquest gave me the firmest conviction that the Central-American hieroglyphics stood for objects and nothing else. From the day that I obtained a copy of Landa's work (which was in the Spring of 1871, in which year after a prolonged sojourn in Central America, I had come to New York), the impression was rooted in my mind that the believers in this alphabetic table were laboring under a manifest delusion. This impression grew stronger when watching the movements made in the phonetical deciphering, I noticed that the specimens offered to the public were only so many witnesses of the valueless character of the so-called phonetic key. The discussion and argumentation were not conclusive nor was the result in any respect important.

The question, whether that people wrote with letters signifying sounds, or with symbols meaning objects, hence, whether their recording represented phonetical or pictorial writing cannot, of course, depend upon the authority of a single author. Were Landa the only one who had treated this subject, and had all the other writers passed it over in silence, we might have been obliged to accept his statements. But such is not the case. There is not an author of note, in the whole literature of the Conquest, who has failed to devote a few lines to the singular circumstance, that the natives, though highly advanced in all sorts of technical arts and fond of recording, were notwithstanding quite ignorant of alphabetic writing. You will not perhaps find the Spanish writers using exactly this language, nor the contrary term, pictorial writing; but they described perfectly and unmistakably what we mean to-day by these two different operations. The expressions which they almost invariably employed were, that the Indians wrote with signs, figures, characters or symbols. Below is the abstract that I made of these passages, beginning with what Cortés first wrote about this subject (1521), and concluding with the remarks on the same subject made by the learned Jesuit Acosta.¹ You will find these authors unanimous in their statements. None make the slightest intimation that the Indians had alphabetic writing.

Should you, notwithstanding, still feel doubtful as to the force of these mere literary evidences, let me remind you of a different kind of proof, which is more impressive than the best worded statement can be; I mean the collection of pictures, called the Mendoza Codex. The first Viceroy of Mexico, whose name it bears, was anxious to secure the interpretation of some of the most important pictorial compositions of the conquered race. He convoked, as is well known, a number of expert Indians, who gave to another

body of Spanish missionaries the meaning of each little picture, which explanation was set down in the Spanish language and provided with corresponding numbers, so that no mistake could occur. There will certainly be no objection to calling this work an authentic interpretation. Starting from this premise, a comparison made between the Spanish text and the corresponding figures or paintings will convince us, at first sight, that they were not meant for letters based on an alphabetic system, but for tangible objects of every imaginable kind. A few of them you would be able to identify and recognize, at once; most of them however would escape your recognition, for various reasons. Allow me to indicate some and the chief of these reasons. First, these objects refer to a people's history and policy, with which we are very little acquainted. Secondly, they represent a large array of paraphernalia, which belonged only to them and are now lost. Thirdly, they are delineated in a way strange to our methods of drawing. Finally, many of these pictures are, so to speak, short hand conventional symbols, the meaning of which no happy guess and no keenness of penetration could interpret, and which would be lost to our knowledge, if the above mentioned explanation had not been secured. This, however, being fortunately preserved, in the interpretation, we cannot help coming to the conclusion that the painters of those characters did not write a certain text with letters and words, nor with symbols and characters which conveyed sound or appealed to the ear, but that the office of the paintings was exclusively to impress the eye, and by this means recall to the memory of the beholder objects seen and known, or if there was a series of objects represented in a row or column, to evoke an association of ideas connected with events of their history, policy and religion.

[pp. 65–66]

Just here it is proper to meet a seemingly very important objection. There is an opinion current that the described system of pictorial writing may indeed have been employed by the Nahuatl races of Mexico, but that there is no reason to believe that it was also employed by the Maya people of Yucatan, the so-called Landa alphabet affording a striking evidence against attempting such a generalization. Let me meet this objection in a few words. If this had been the case, the missionaries, I think, would have taken immediate notice of such an unexpected exception to the general rule. It would have created among them a subject of oral and even written discussion. Their reports to the provincial of the Order would have dwelt upon it, and with great emphasis. So strange a circumstance would also have been embodied in their printed historical works. Moreover, it must be remembered, that the friars were in constant communication with each other. They often changed their residences; one friar, who had been working in Mexico, would go to teach in a convent of Yucatan, another from Yucatan would go to Mexico. It is hardly credible if these two countries had differed in so essential a point of culture as this that the natives in the one country should still have remained in the stage of pictorial writing, while the other was so far advanced as to use phonetical writing, that the fact should have been unnoticed.

Landa's alphabet, as it stands, seems to contradict the common statement and generally accepted idea. Bishop Landa was undoubtedly a high authority. He was a man of

LANDA ALPHABET.								
	Signs.	Phonetic value.		Signs.	Phonetic value.		Signs.	Phonetic value.
1.		a	10.		i	19.		p
2.		a	11.		ca	20.		pp
3.		a	12.		k	21.		cu
4.		b	13.		l	22.		kn
5.		b	14.		l	23.		x#
6.		c	15.		m	24.		x
7.		t	16.		n	25.		u
8.		e	17.		o.	26.		u
9.		h	18.		o.	27.		z

Figure 15.1. The Landa Alphabet

learning, prominent in the church, and author of the first revised Maya grammar.² He may therefore be considered fully conversant with all that concerns the language of the Yucatecan natives. Besides, he was the author of a history of this people; he described their habits and customs and explained their calendar. The other historians of Yucatan did the same, indeed, but none of them, strange to say, makes mention of an ancient alphabet having been in use with the Mayas, nor points to the fact that Bishop Landa did discover, or was reputed to have discovered among them, the art and practice of phonetic writing. Landa, as it seems to me, stands alone in his statement.

How is this to be explained?

[pp. 68–71]

In the first place, we find the number of Landa's letters to be eighteen. This does not agree, however, with the number of sounds which ancient as well as modern Maya

grammarians have elicited from the lips of the natives. It is acknowledged that the Maya sounds and their Spanish representatives are twenty-three (Ancona 1878, Vol. I, p. 113) in number. No definite value, however, ought to be given to the fact of five wanting sounds. We may say Landa has forgotten to secure them in this alphabetic table.

You will secondly notice, that the succession of the alphabetic sounds is arranged in full agreement with ours. This observation will weigh a little heavier in the balance of our scrutiny. One may ask how it did happen that the Mayas, who are a nation of pure American stock, should have arranged their alphabet in a succession like that of the Semitic and Indo-Germanic races? How is it possible that Landa, the grammarian, should not have been struck by this unexpected coincidence, and not have deemed it needful to devote even a few words to it? This circumstance, however, may be explained. We can readily suppose that before receiving any information from his Indian teacher the bishop wrote down the Spanish alphabet in the usual way, and then placed the symbols according to the indication of the Indians; though we must confess that this proceeding would have been somewhat unusual. For it is more natural for us to suppose that if Landa required from the Indians the linguistic key, he would have asked them to bring it to him in such an alphabetic succession as they used; a succession, however, which it is hard to believe was identical with ours.

Thirdly, a still clearer light will fall on the alphabet of Landa if we view it from the following point: Landa, as you will notice, puts down: (1) three different symbols for the vowel a; (2) two different symbols for the consonant b; (3) three also for the letter l; (4) two for the vowel o; (5) two for the vowel u.

It is well known that the Mayas formerly and today give their vowels the same sound as the Spaniards. Why then should the vowels a, o, u, have required two and three different symbols respectively? Was Landa's hearing more acute than that of all his countrymen? Let us, however, admit the explanation by assuming that he, possibly, wished to obtain the symbols for the Spanish short and long vowels, and that the Indians, anxious to serve him, sought and found the corresponding symbols for both. How then, on the other hand, did it come to pass that Landa thought it necessary to set down a third symbol for the vowel a? If there was a necessity for doing so, you will ask why was there not also one for the vowels o and u, which as you will notice, exhibit only two symbols each. Landa also shows two symbols for both the consonants, b and l. There was, as I suggested, a plausible reason for giving two symbols to each of the three vowels, but I feel unable to fathom the ground upon which the consonants b and l, which in the Maya language admit only one way of pronunciation, should have required two symbols each? There are, however, two consonants in Maya, which, on account of their double sound would admit two symbols, the k and the p, the double one sounding like kk and pp. Landa took this ground in attributing to each of them two symbols, but I repeat he was not justified in doing so with b and l.

The survey just made, however, is only a very superficial one. Everybody who takes up a new subject feels tempted to make objections, and those that I have made are by no means so strong as to destroy the possibility that the table represents, indeed, a certain Yucatecan phonetic alphabet. I only protest that it is not the Yucatecan phonetic alphabet. Students seem always to have read and understood as if Landa had written that this was

the Yucatecan alphabet. Landa did not; he says literally translated, "Of their letters I shall put down an abc" (de sus letras pondré aqui un a,b,c). Now, one must be well aware of the different turn which the whole meaning of Landa's text takes by the employment either of the definite article the or the indefinite article a. If Brasseur and his followers had paid closer attention to Landa's wording, they would assuredly have become more cautious in their interpretation. Their blind confidence in the fact that they had before their eyes the phonetic alphabet of the ancient Mayas would have been somewhat shaken. The question would have arisen in their minds: If this was said by Landa to be an abc or an alphabet of the Yucatecans, and not the alphabet, does this not clearly suggest that there were other alphabets in use? All nations whom we know to have attained to phonetic writing have traced their letters after a standard or model which had been established as such. Time and fancy alone were the causes of certain alterations in the contours of the letters. Landa's assertion, therefore, that he intended to present a Yucatecan alphabet is either preposterous, or—it must have stood in connection with something else not yet ascertained or verified, and still to be discovered.

[pp. 73–75]

The quotations given below contain an ominous suggestion of the purpose for which the Landa Alphabet might have been constructed. For, should we be able to discover the meaning of the twenty-seven Landa symbols, by proving, first, that they are objects, and the kind of objects they represent, and secondly, that the Maya words for all these 27 objects, beginning with the letter a and the symbol it represents, in strict succession down to the letter z, are only so many alliterations, arranged in an alphabetic order—should we, then, not be entitled to assume that the presumed phonetic key represents nothing else than one of the various attempts made by the Spanish missionaries to teach their Yucatecan pupils how to write the prayers, or any other text, phonetically by means of symbols?

In a lecture on the Mexican Calendar Stone, delivered two years ago, I indicated that such was my opinion, but I did so only in an incidental way (Valentini 1879: 8) The lecture was printed in German, and finding its way to the public at large through translations made of it in the English and Spanish languages, I have been requested, privately as well as publicly (Rau 1879: 50), to make the incidental assertion good by giving positive evidences for it. The opportunity for doing so was kindly offered me by the Committee of this Society.

[pp. 75–81]

Let me first make mention of a few difficulties which lie in the way, if we desire to identify an object drawn by a Yucatecan pencil with as much certainty as we are often able to succeed in doing when we have a Mexican drawing before us. There is no Mendoza Codex to assist us in the interpretation of these Yucatecan pictures. Therefore we may feel confident of having identified this or some other object, but we lack established certainty. Further, in our special case, it can be noticed that the Landa drawings do

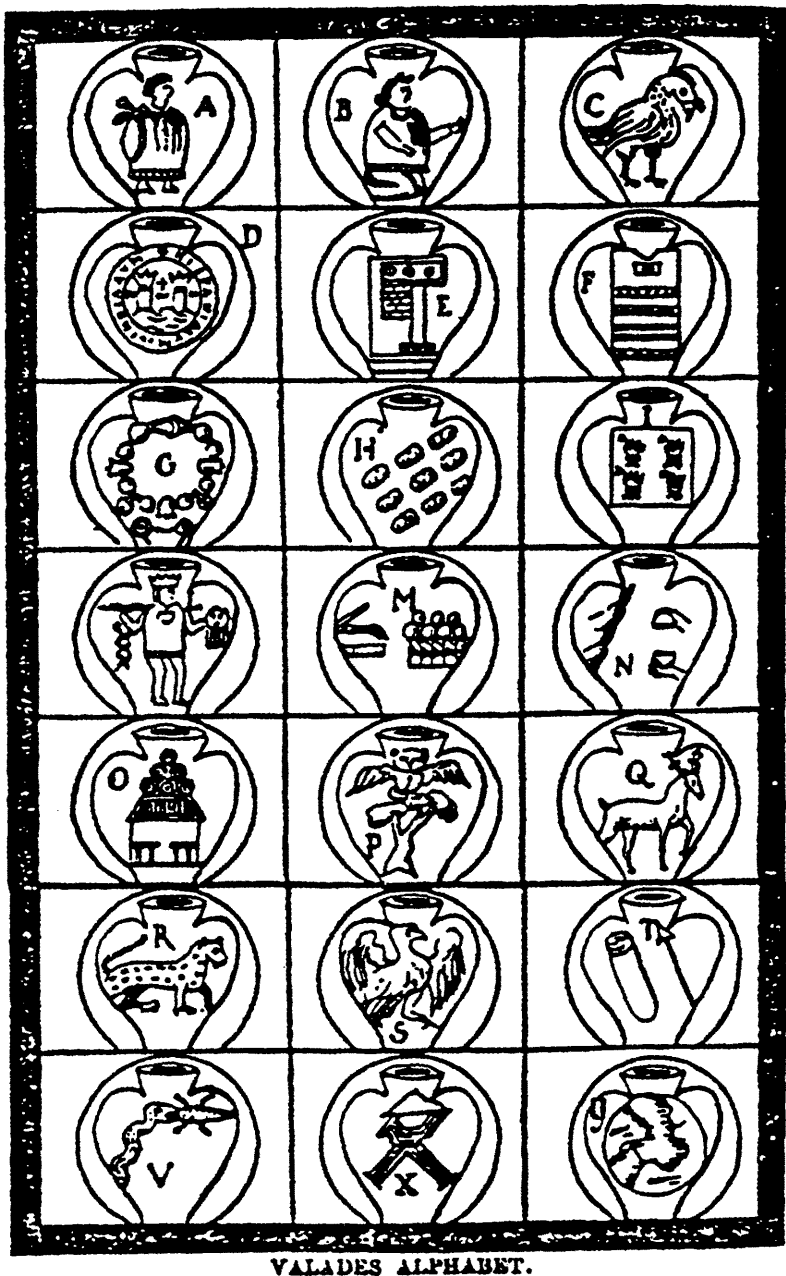


Figure 15.2. The Valades Alphabet

not exhibit the same painstaking elaboration as do those which are preserved in the Dresden Codex or that of the Tró. They were evidently but roughly drawn, then copied and copied again, and hardly with enough of caution to make us accept them as faithful facsimiles of the original. Moreover, they lack the presence of a color. An attempt,

therefore, to interpret these drawings might be considered as fraught with the danger of misconception, and be regarded from the very outset with the suspicion or reproach of presenting fancy work. If now, despite the hindrances just mentioned, I am still confident in seeking to give a correct interpretation, let me add, in order that no prejudice be raised against my attempt, that it seems to me but fair to inform you of the principles on which the whole attempt is based, and of the resources upon which I rely.

They are the following:

All Central American hieroglyphics are either representations of natural or manufactured objects, or they are symbols, i.e., objects conventionally chosen to represent some abstract idea.

Regarding the first class of objects, one portion would reveal its meaning at first sight, as I mentioned in the beginning of my lecture; the other, however, requires interpretation. Therefore, with respect to that set of Landa's drawings whose outlines are so correctly traced that they leave the impression of the faithful reproduction of an object, which object, besides, belongs to the class of the "known ones," I have no other resource than to appeal to your common sense and experience. Regarding the other set, either on account of their uncertain tracing, or their specific Central American nature, I shall endeavor to explain them by the help of "similes." These similes shall be selected from the Mexican Codices or from other authentic sources of interpretation. I feel no hesitation in appealing to this help, because, in my conception, Mexican picture-writing is only a historical outgrowth from a prior, and as I have no other term for it, let me call it, ancient Yucatecan art.

After having secured the identity of the drawings I shall give you the word for each of them, as it was spelled and sounded in the Maya language. Since the force of the demonstration cumulates in the evidence of the fact that the alphabetic table of Landa was arranged by the missionaries for the purpose of teaching the Maya pupils how to retain in memory the strange sounding Spanish words, and since the device to effect this was found in causing the pupils to paint for each of our letters such objects or symbols as, when their names were sounded, would manifest a striking assonance to the letters,—it is clear that we must look for a correct and authenticated vocabulary. If, for instance, we should be able to state that one of the drawings, without any doubt, must mean a dog's-head, and if we did not know that dog in Maya sounds pek, the curious circumstance that Landa did place the letter p as corresponding to the drawing of the dog's-head would leave the secret of the fabrication in the dark. Regarding this great point, namely, of giving the correct Maya word for each of the objects that we have been able to identify, I feel extremely happy to acknowledge an authentic and very unexpected support afforded to me and also to all students of American linguistics by the publication of Señor Pío Pérez's dictionary of the Maya language, it being the first of its kind.³ It had been slumbering in manuscript for thirty years, and it was only by the unwearied zeal of our Yucatecan friends and collaborators, to whose enthusiastic interest in the antique treasures of their country this Society can bear ample witness, that this valuable labor was rescued from oblivion and handed over to the scientific world. In all cases, therefore, when the Maya word is to be given for the symbol, I shall refer to the authority of this dictionary and avoid its further quotation.

Finally, if in my judgement, the identity of the one or other symbol be of doubtful recognition, I shall at once state it, and without entering the cross ways of conjecture leave it out of discussion.

Let us fancy our learned Bishop Landa sitting in the refectory of his convent in Mérida. A group of barefooted Indians stand waiting at the door and their elected speaker is beckoned by Landa to approach the table. In response to his question what object he would think of and draw when hearing the sound of a, the man with somewhat doubtful hand begins to trace upon the sheet of paper laid before him, this little picture which you notice standing first in the three rows of the alphabetic table. You will allow me to place this picture in a more intelligible position. You will catch its meaning better when placed horizontally.



Figure 15.3. The letter A

The first impression is, that the painter meant to draw the head of some bird. The pointed beak, the nostril, the position of the eye, will justify such an impression. But upon comparing this specimen of drawing with the pictures of bird heads appearing in the Mexican as well as Yucatecan codices, I came to the conclusion that I may be wrong. You notice our specimen does not present the lower jaw, which nature requires, and which is always expressed in the delineation of birds. Moreover, I was struck by the presence of the cross line which the Landa painter traced and which I noticed as not existing in any representations of bird's heads, and therefore, according to my experience in this line of Mexican art, was evidently intended to serve as something distinctive. Now, what peculiar office may this little feature perform? Let me give you the answer to this question by showing you a copy made from a photograph taken from an earthen cup, exhumed in Copan, and now in possession of the Economical Society of Guatemala.



Figure 15.4. Copan cup

A man is engraved on this pot, sitting with his legs crossed. He wears a large helmet or head-dress, composed of the heads of two animals. The upper one is that of a bird, the lower that of a tortoise; both are so clearly defined that we shall not need a zoologist's permission to recognize them as such. Upon comparing Landa's drawing with this engraving of the tortoise, it cannot be denied that the former shows a rough attempt to delineate the same outlines given by the more skillful engraver of the pot to his subject. Notice, in both, the pointed perpendicular beak, the absence of the lower jaw (an ingenious hint of the artist that the size of the lower jaw of the tortoise stands in a dwindling proportion to the upper one), and finally in both the same horizontal cross line. What this peculiar feature was intended to stand for, I do not hesitate to declare. The head of the American tortoise shows a yellowish stripe running in this direction and encircling the eye. It is a true copy from nature, and seems to have been accepted by the artist as a conventional feature as well as a fine point by which the head of the tortoise should be readily distinguished from that of a hawk or owl.

THE LETTER A

If we now ask for the Maya word for tortoise we shall find it eminently suited to the purposes of our demonstration. It is *ac*. It gives the assonance of the a, the first alphabetic letter. It is a promising discovery.

We come now to the second symbol standing also for a. Was it intended to stand for the sound of the long a? We are not warranted to believe so. I prefer to think that Landa did not fancy the first picture, and asked the man to draw another one a little more illustrative of the former. The painter, warming up to his task, then drew what you will recognize as a pretty good representation of a sickle, or more correctly, of a curved obsidian knife.



Figure 15.5. The second symbol for the letter A

The word for it in Maya is *ach!* In it the assonance to a reappears for a second time. I think the picture speaks for itself and needs no further explanation. But should there be a doubt as to whether those people used curved knives, or did not represent them conventionally, just in this way, let me show you a specimen taken from the Mendoza Codex, I, plate 16, figure 6,

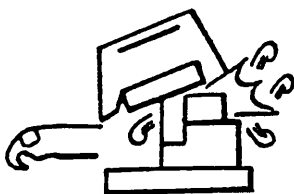


Figure 15.6. Yztitlan Pueblo

which stands for the coat of arms of the city of Itztitlan, city of knives (*iztli* = obsidian). Notice also in Landa's drawing the large central boring and the five smaller holes around it; they evidently indicate that we have a tool before our eyes, and additionally show the way the blade was fastened to the handle.

We next come to the third symbol for the letter a.



Figure 15.7. The third symbol for the letter A

Dr. Brinton (1870) sees in this picture the representation of a leg or a boot of some kind. I think he is right, despite the objections that might be raised against this explanation. It may be said that since the Mayas did not wear such an article of luxury, there would not exist a word for it in their language. But as the Spaniards wore boots and stockings, and Bishop Landa undoubtedly did so, it will not be deemed to be too far-fetched to suppose that the Maya tried to give this conspicuous foreign article a name, which name again, might have been a word expressing an analogous idea. In such an emergency, a very ready substitute for boot as well as stocking appears in the word leg, for which I find the word sounding like a pure a. It is to me as if the bishop had insisted upon obtaining from the Indians the first letter of the alphabet in its purest vocalization, without any additional consonant, as in the two previous examples, with *ac* and *ach*, and that the draftsman, possibly, had copied his Eminence's leg, vested in the purple stocking with the customary cord and tassel about the knee.⁴

THE LETTER B

Landa gives us two symbols for the letter B.



Figure 15.8. The letter B

Those who are conversant with the way in which that people painted footprints will instantly perceive that the first symbol renders this feature most unmistakably. The sole of the foot and the toes are clearly expressed and inclosed between the two parallels, which signify the borders of the road or path. The picture speaks for itself, and no simile will be needed to authenticate the interpretation. Upon consulting the dictionary for the word path, footprint, we find it expressed by *be*. This word gives the pure sound for the second letter of the alphabet, just as the bishop was desirous to obtain it.

I am unable to define the meaning of the second symbol given for the letter b. Had I been the Indian asked to give the bishop still another object to represent the sound of

b, I would have suggested the symbol for the tenth day of the month, the name of which is Ben, and which was represented as follows:



Figure 15.9. The second symbol for the letter B

But I think no further corroboration through a second symbol is required, the first being sufficient evidence for the purpose.

[pp. 82–83]

THE LETTER E

The wished correspondence of the e sound with the name of the object which is painted to represent it, will be found in the circumstance that the three black spots which the picture exhibits, were intended to represent three little heaps of black color, such as the painters placed upon a kind of palette for use in coloring and drawing.



Figure 15.10. The letter E

Black in Maya is called *ee* or simply *ek*.

THE LETTER H

Landa's pictorial representation of the same is:



Figure 15.11. The letter H

This picture means ropes tied up. You can distinguish a rope doubled up several times and fastened at the head by another rope in order to hold it together. This sign occurs frequently in the Dresden Codex (see plate 70)



Figure 15.12. The letter H in the Dresden Codex

and also at various times on the sculptured Palenque slabs.

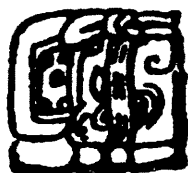


Figure 15.13. The letter H in the Palenque slabs

(It is Brasseur's word for *bambou*, identical with life, it is also our H and reminds one of the Greek letter Eta!)

Tying up days to form a year, and years to form a period or cycle, was a current phrase among the chronologers of those people. I have spoken of it at length in my lecture on the Calendar Stone (Valentini 1879).

The word for year in Maya is *haab*. The Maya h is as strongly aspirated as it is in the Spanish language. The symbol therefore suited perfectly the purposes for which the alphabetic table was constructed.

THE LETTER I

Landa's symbol for it is:



Figure 15.14. The letter I

I cannot recognize it.

THE SOUND CA

In breaking the conventional succession of the alphabetic letters, and introducing at this place a sound *ca*, Landa was right, because the imperfect composition of the Spanish alphabet does not show, as ours does, a special letter for the pure guttural k. The symbol he selected for this sound was undoubtedly a comb,



Figure 15.15. The sound *ca*

because the Maya word *caa* means to pull a man's hair out.

[p. 85]

THE LETTER N

You will understand the meaning of the symbol for the letter N when I complete the Landa drawing.



Figure 15.16. The letter N

Imagine the body of a genuine Central American monkey affixed to this volute and you will come to the conclusion that the painter wished to express by it the monkey's tail. As the symbol is to represent the letter n, which in Spanish sounds as if spelled enne, and as further the Maya word for tail is *ne*, it becomes quite evident why the symbol was accepted.

[pp. 88–89]

THE LETTER U

The letter U is represented by two symbols.



Figure 15.17. The letter U

Both illustrations convey perfectly what the Maya expressed with *uuc*, which translated means to bend, to wind. Whether the draftsman had a certain object in view I do not undertake to decide.

THE LETTER Z

In the picture standing for the letter z I cannot help recognizing a copy of the Central American metlatl or grinding stone, the forms of which are quite familiar to every Mexicologist. You may also distinguish the roller,



Figure 15.18. The letter Z

the shadow below very likely representing *la masa de maíz*, the dough under treatment, and the *masa molida*, the mass still to be ground lying as the women of those countries place it, in the middle of the stone. The Spanish sound for the alphabetic z is *tzeta*, and *zee* is to mash Indian corn!

I have concluded my explanation of the genesis of the Landa alphabet. In conformity with what was desired, I have shown, as I believe, the entire agreement between the sound of each alphabetic letter and that of its corresponding symbol. Had I been able to identify the symbols for i, m and o, I am certain that they also would have presented no exception to the rule pervading the series of letters from A to Z. This rule is evidently a real one, and the uniformity of its application can by no means be considered as resulting from any chance. Moreover, as already explained, this alphabet was not the only specimen of its kind. Its principles must have been devised and put in practice long before Landa set his foot on the shores of the peninsula, which was in 1549. It is known that the practice of this peculiar mode of instructing the Indians was adopted by those friars who in the year 1524 came to teach in Mexico. From them the method must have spread through all the provinces of the Spanish Dominion, and have been introduced into Yucatecan by the friar Villalpando, who, having passed his apprenticeship in Mexico and Guatemala, founded the first Maya schools in 1546, and was Landa's teacher in the language of the natives.

NOTES

1. A long footnote containing citations from Hernán Cortés, Peter Martyr d'Anghiera, Gonzalo Fernández de Oviedo, Toribio Motolinía, Bernardino de Sahagún, Francisco López de Gómara, Diego de Landa, Jerónimo Mendieta, Joséph de Acosta, and Juan de Torquemada has been omitted. [Editors' note]

2. A citation on Diego de Landa, from Elígio Ancona's *History of Yucatán* (Mérida, 1878), has been omitted. [Editors' note]

3. Its author spent the years 1835 to 1859 in collecting the material for his work. At the time of his death he had only gotten as far as the letter U. Our well known and lamented friend, Dr. Hermann Berendt, a perfected scholar of the Maya language, was then requested to complete the remaining letters, a task which he faithfully accomplished and for which

we owe him our grateful thanks. As the six hundred dollars, which Señor Pío Pérez had left for printing the manuscript, were far from sufficient to cover the expenses, Señores Carlos Peón and Eligio Ancona have generously paid the balance, besides supervising the passage of the work through the press. Copies of the dictionary are for sale by Dr. Geo. E. Shields, 896 Broadway, New York.

4. The word *a* will not be found in the Maya dictionary to signify *leg*. It belongs to the sister language of the Maya, the Quiché, of which Brasseur has given quite a full vocabulary in his *Grammaire de la langue Quiché*, Paris, 1862, pages 167–246. The intercourse between these two sister nations was at Landa's epoch much more intimate than it is today. It is recorded in the Katunes of the Maya history that about the year 1302, a.d., a host of Quiché people descended from their highlands into the plains of the peninsula and after having assisted in the destruction of the city of Mayapan, became residents of the country.

“Key to the Maya Hieroglyphs”

Cyrus Thomas

One year after the appearance of Valentini's harsh assessment of the Landa alphabet, Cyrus Thomas published his first contribution to Maya research. It was an important study of the Codex Troano, in which he identified passages dealing with New Year ceremonies, noting their correspondence with rituals described by Landa (Thomas 1881, 1882). In the same study, in a commentary on the Tablet of the Cross at Palenque, Thomas firmly showed the true reading order of Maya texts.

Thomas was born in Tennessee and worked as an entomologist for most of his earlier life. In 1882, he was appointed head of a Division of Mound Exploration at the U.S. Bureau of Ethnology. He accomplished notable feats in this job. By 1894, he had amassed a wealth of data that conclusively demolished the theory of a separate Mound Builder race, demonstrating that the large sites of the Mississippi valley had been built by the ancestors of contemporary Native Americans (Willey and Sabloff 1974: 49–50).

Thomas regarded Maya writing as largely phonetic. He relied on Landa's alphabet to ascribe phonetic—mainly consonantal—values to signs. His actual method of decipherment remains obscure, especially his manner of reconstructing complete words. Like Rosny, he made important insights into the nature of the system, but, also like the French linguist, he failed to find a systematic way of extracting consistent results from his ideas.

The major challenge to Thomas' interpretation came from Eduard Seler, who in 1892 wrote a letter to the editor of Science, contesting an earlier article by Thomas. The controversy developed into a spirited debate, parts of which are reproduced below (Thomas 1892a, 1892b; Seler 1892, 1893). In time, Thomas softened and modified his suggestions, so that, by 1903, he had come to agree in part with Seler and to deny the existence of phoneticism in Mayan script.

I give here in as limited space as possible a list of the Maya letter glyphs so far as I have determined them, together with the corresponding phonetic equivalents; and some examples of my attempts at deciphering the written characters of the Codices.

Written in 1892 by Cyrus Thomas (1825–1910). Reprinted by permission. Not for further reproduction.

It is necessary to explain that the letter-equivalent given to each is to be understood as only the chief phonetic element of the character represented, for, in most cases, more than this chief or prominent element is included in the one symbol. The consonant sounds are those chiefly represented, but the character, as a rule, combines therewith a vowel and sometimes even a subordinate consonant sound. Hence it happens that the same consonant sound is represented by several different characters depending upon the subordinate phonetic elements combined with it. A change, however, in the character does not necessarily follow from a change in the order of the phonetic elements it represents; thus, what denotes *ci* as a prefix may stand for *ic* or *c* at the end.

The examples given of the added vowel and subordinate consonant elements, are intended only as asserting that such combinations have been discovered; there may be, and probably are, others. As it would require too much space and too many illustrations to give full explanations of the steps by which I have reached the conclusions given, I must take for granted that those interested in the subject will be able to test these from what is presented.

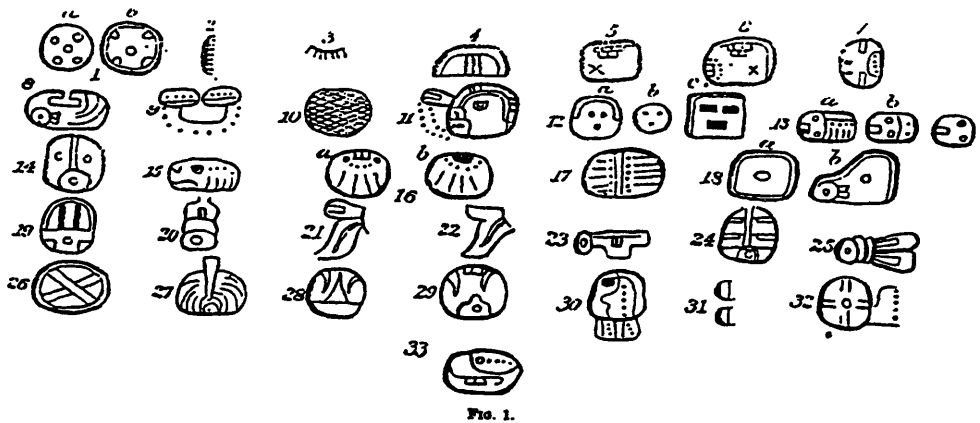


Figure 16.1. Letter symbols

LETTER SYMBOLS

- 1 (a, b). *B'*.—I find no marks or rule by which to determine from the symbol alone the combined phonetic elements. This is Landa's character for *b* with a dot added.
- 2. *Ca*.—As a prefix, sometimes *ka* in the Cortesian Codex; *c* hard or *k* as final. Landa's character.
- 3. *C'*.—This is generally found in place of an eye where it denotes *cim*, *cin*, or *ci*.
- 4. *C'*.—*Ci* as a prefix, *ic*, *ich*, or *c* as a suffix or final.
- 5. *C'* or *K*.
- 6. *CH'*.—The characters 5 and 6 are quite variable and often difficult to determine because the complete form intended is not always given. In some instances the little dot-surrounded character at the left of 6 is solid, then a slightly different rendering appears to be demanded. Landa's *k* appears to be a combination of Nos.

- 3 and 5. The latter sometimes contains the dotted portion seen in 6. No. 6 is frequently found where it must be interpreted *che*, "wood," yet occurs without the dot-surrounded portion where it has the same signification. Other variants are found in the Dresden Codex.
7. *K'*.—Found as *ke* and *ek*, also as *Ce*.
8. *Ch'*.—Sometimes *chi*, as in the symbol for *Chikin*, "west"; *Ch'* as final. Landa's first *x* appears to be an attempt to give this character which is the partially closed hand.
9. *KU'*.—Landa's symbol. This does not appear to be subject to any variations that affect its phonetic value.
10. *X'*.—Cross-hatching usually indicates *x* (sh) as the leading phonetic element; however, it is sometimes rendered by *ch'*, as is evident from its appearance in the symbol for the day *Chicchan* if we consider it phonetic. However, the day symbols cannot always be relied upon in this respect, as will be seen by what follows.
11. *X'*.—Landa's second *x* is substantially the same as this character. But he has taken two characters for one, as in this the *x* is represented by the dotted lines alone; the little loop at the forehead, or rather the little parallelogram, in it is *a*; the face character *n*. The whole character appears to be properly rendered by *xan*, "slowly, leisurely, gently." The chief variation in the combination is found in the loop at the forehead, which may be a vowel or consonant. This form of *x* is seldom found except in combination with *n*.
- 12 (a, b, c). *E* and *Ee*.—The variations are shown in 12b and 12c.
- 13 (a, b, c). *L'*.—This is Landa's first *l*. The variations are shown in 13b and 13c. Found in combination with different vowels, as *le*, *ol*, etc.
14. *L'*.—If Landa's second *l* be turned round it will be found to be a rude imitation of this character, which is the symbol for the day *Ahau*. *Li*, in the symbol for *Likin*, East; follows *ku*, etc.
15. *M'*, *Me*.—Symbol for the day *Men*.
- 16 (a, b). *M'*.—Varies in having the little loops at the top, sometimes solid, as in 16b. The dot-surrounded portion of 16b is used alone in one series of the Cortesian Codex for this letter followed by *e*. The combinations have not been traced.
17. *M'*.—This appears to be another form of *m*, or *m* doubled, or combined with *n*. Not satisfactorily tested as yet, though *m* is certainly the chief phonetic element.
- 18 (a, b). *M'* (?).—Although not thoroughly traced, I am satisfied that this character, which is the symbol of the day *Muluc*, has *m* as its chief phonetic element, generally with *o* or *u*. The part representing the *c* is omitted from the day symbol, but is found in the little ring and loops in 18b. The form of the contour of a character is generally of no significance as it may be round, square, or deeply notched without any change in its meaning.
19. *P* or *Pp* (?).—Although I have not tested this satisfactorily, I am certain from my examinations that its phonetic equivalent is *p* usually *pp*. There are some variations found chiefly in the lower portion. The *p* and *b* appear to be interchangeable in the Codices even in the same word; for example in the Dresden Codex 48c, we find the *b* character in the symbol for the month *Pop*, while on 50b it is replaced in the same month symbol by our No. 19.

- 20, 21, 22. *T'*.—These characters (20, 21 and 22) appear to have *t* as their chief phonetic element, varied according to the markings in the upper portion. No. 20 is also varied by the marks in the lower or middle circle.
23. *Th'*.—Is followed by *e* and *i*.
24. *Tz'*.—I am also inclined to believe that the two streamers or lines which extend upwards in characters, as in the symbol for the month *Tzec*, indicate the presence of this sound.
25. *Z', Za*.—Varied according to the markings in the wings and circle.
26. (*Dz*).—Sometimes *z*.
27. *Y'*.—The index to the variations in the signification if there be any, which is doubtful, will probably be found in the length and form of the stem.
28. *Bal* or *bil* (?).—This is the symbol for the day *Acbal*.
29. *Ch* (?).—Usually followed by *o* or *u* when not terminal. Is the symbol for the day *Chuen*.
30. *Cab*.—The signification of the appendage so often found attached below this symbol has not been ascertained.
31. *H'*.—Sign of aspiration, the open ends always turned toward the character with which it is connected.
32. *Kin*.—Sometimes without the wing. The latter appears to be used for *n*, the circle for *ki*.
33. *Kal*.—If the separate elements are represented, it is probable the section with the dotted line stands for the *k* and the curved line with the two little teeth for the *l*.

Having submitted samples of my interpretation to Dr. H. T. Cresson of Philadelphia subsequent to the first notice, in *Science*, of my discovery, I am much pleased to learn that he has reached a similar determination as to some of these letter symbols by an independent method. As I was not aware until the publication of the article mentioned, that he was at work on the Maya characters, this agreement in our conclusions is highly gratifying, and serves to strengthen both in the conviction that we are making genuine progress in the solution of this difficult problem.

I give here a few interpretations of groups of compound characters to illustrate the combinations of the letter symbols.

Fig. 16.2 represents a group of four compound characters in the upper division of Pl. XXII Codex Troano, to be read in this order: upper left, upper right, lower left, lower right; which we will number in the order given 1, 2, 3, 4.

The following is probably a substantially correct translation: (1) *U-Zabal*, (2) *U-le*, (3) *Cutz*, (4) *2-yaxkin*: "Set (or literally do the setting of) the snare for the turkey on the second day of Yaxkin." The prefix to No. 1 and to No. 2 is the character for *u*; the upper character in No. 1 appears to be the symbol for *z* reversed; the band across the lower character the *b* (possibly interchangeable with *p*). The figure below agrees very well with this interpretation.

The group shown in Fig. 16.3 is found in the lower division of plate 26, Cortesian Codex. The characters are taken and numbered in the same order as in Fig. 30. No. 1 is supposed with good reason to be a deity symbol, the name however undetermined.

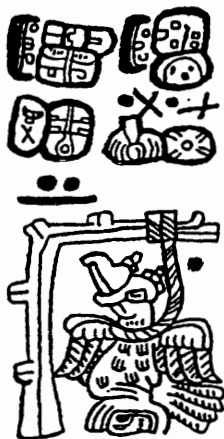


Figure 16.2. Four compound characters in the upper division of plate 22, Codex Troano



Figure 16.3. Group in the lower division of plate 26 of the Cortesian Codex

Assuming this to be correct, I translate the group as follows: (Deity) *xan yalcab kal-cab*, "As" or "in the name of (the deity) slowly gather the swarm of bees and inclose them in a hive."

The figure below shows a priest wearing the mask of the supposed deity, hence we say "as."



Figure 16.4. Group from the middle division of plate 32, Codex Troano

Fig. 16.4 is a group from the middle division of plate XXXII* Codex Troano. The characters are numbered in the same order as the preceding and are translated as follows: *Mulcin ku ci-* (god of death) *xaan*; "Collect together for the temple of the holy god of death palm wood." The picture below represents individuals bearing in their hands what appear to be blocks of wood on each of which is the symbol for *che* "wood."

The little character at the forearm in No. 4 is the symbol for *aa* which is found in other combinations where it has the same signification.

“Does There Really Exist a Phonetic Key to the Maya Hieroglyphic Writing?”

Eduard Georg Seler

Cyrus Thomas' opponent was a towering figure in Mesoamerican studies. Born in the small town of Crossen an der Oder, in what is now Poland, Eduard Seler graduated in mathematics and natural sciences from the University of Breslau; later he worked as a professor in Berlin. Over time, Seler acquired a passionate interest in languages and eventually turned his attention to the peoples of the New World. In this he was supported by a position at the *Königliches Museum für Völkerkunde* in Berlin, then directed by the prominent ethnologist Adolf Bastian (1826–1905), who saw ethnology as “the mental life of people” (Kubler 1991: 164). In 1887, Seler went on to complete a doctorate at the University of Leipzig, where he studied the conjugation system of Mayan languages. His devotion to Middle American studies was assisted by his marriage to Caecilie Sachs, who, unlike him, was a member of a wealthy family; not only did she provide economic support for her husband's investigations, but she also became a close collaborator and researcher in her own right. Additional support came from Joseph Florimond Loubat (1831–1927), whom Pope Leo XIII elevated to a papal duchy in 1878 (Kubler 1991: 165). Part of a family that owned a portion of Broadway, in New York, Loubat could afford to subvent Seler's expeditions and to endow a chair for him at the University of Berlin.

Seler's earliest article on Middle American topics was a study on Maya religion and writing systems (1886). His interests embraced all of Mesomerica, however, regardless of time or ethnic group. In addition to extensive archaeological and ethnological studies, which eventually reached an enviable total of 257 articles and books, his most important contributions elucidated Mexican codices and translated and interpreted Nahuatl texts (see Nicholson 1973). Nevertheless, he continued to write about the Maya throughout his life, characteristically applying his wide knowledge of Mexican iconography, writing, and calendars and stressing the essential unity of Middle American cultures—one suspects that Bastian's more sweeping notions concerning “elementary ideas” (a precursor of Carl Jung's “inborn ideas” or “primordial images”) exercised a heavy influence here (Kubler 1991: 163). Nonetheless, Seler was a clear leader among the scholars who established, at the turn of the century, a course of objective, detailed analyses of field and documentary

Written in 1892 by Eduard Georg Seler (1849–1922).

evidence as the sole means of recovering valid information about Mesoamerican antiquity. In this he reflected the positivist tendencies of the time, with an emphasis on determining "what is factual" (Kubler 1991: 166).

For Seler, Maya writing was essentially ideographic, a view he articulated explicitly in his earliest works. While accepting certain phonetic qualities in Maya writing, as exemplified in Landa's alphabet, Seler thought these were of little importance in pre-Hispanic times, although they might have been accentuated in importance by the time Landa wrote his account. (The culprit here would have been Spanish influence, an assertion echoing Valentini's ideas.) Seler's work is characterized by meticulous attention to detail, especially in his identification of the iconic referents of signs. He could hardly be sympathetic with generalizations that did not account specifically and rigorously for the behavior of each sign. Seler dismissed Thomas' interpretations by criticizing his specific inconsistencies and misinterpretations, which for him invalidated Thomas' entire approach. Seler's views would be very influential in later years, particularly in the work of J. Eric S. Thompson.

In No. 494 of this journal Professor Cyrus Thomas attempts to give a key for the interpretation of the Maya hieroglyphic writing, taking as a guide and starting-point Bishop Landa's well-known alphabet. It is not for the first time that in this way an interpretation of the Maya Codes has been attempted; but as yet most scientists were of the opinion that these attempts failed to give a satisfactory result.

The hieroglyphs given as letter symbols by Bishop Landa without doubt possessed a certain phonetic value. For instance, Landa's first *a* (Figure 17.1, 1) is the head of the turtle, *aac*, represented by quite a similar hieroglyph (Figure 17.1, 2) in Codex Cortez, 17a. Landa's *cu* (Figure 17.1, 3) is the same hieroglyph as that of the day *cauac*, and conveys the ideas of the cloud and of heavy things, as, for instance, a stone. It is an essential element of the hieroglyph (Figure 17.1, 4) which expresses the idea of carrying a load on the back, *cuch*. Landa's *ku* (Figure 17.1, 5) is the hieroglyph of the bird named "quetzal" by the Aztecs and *kukul* by the Mayas. The sign of this bird (Figure 17.1, 6) is seen in Dresden 16c and Troano 17*b. Landa's *o* (Figure 17.1, 7) seems to exhibit the characteristic elements of the hieroglyph of the great red macaw, *mo*, as seen in Dresden 16c (Figure 17.1, 8). Landa's first *u* (Figure 17.1, 9) is a well-known hieroglyphic element, exhibiting on the Copan steles the forms shown in Figure 17.1, 10, and undoubtedly conveying the idea of a face, *uich*, perhaps of a bird. The same hieroglyphic element frequently occurs on the neck of the food dishes and drinking cups (Figure 17.1, 11), probably on account of the face with which the Indians used to ornament that part. Landa's second *u* (Figure 17.1, 12) and hieroglyphic element, which is also seen in the sign of the day *cib*, occurs on the jars filled with spirit-liquor (Figure 17.1, 13). It appears to be a modification of a similar design on the Aztec drinking cups (Figure 17.1, 14). The latter refers to the *ome toch* symbol, that is, the semi-lunar curved and hook-nosed ornament of the *Totochtin*, the wine gods (Figure 17.1, 15). This element therefore, seems to convey the idea of drinking, *uuk*. At last, the sign of aspiration given by Professor Thomas (Figure 17.1, 16) is certainly not a "Spanish fabrication," but it is Brasseur de Bourbourg's fabrication, since it is not seen in Landa's text. It has been added to the text by Brasseur de Bourbourg's wholly arbitrary decision. See the photographic reproduction of the page

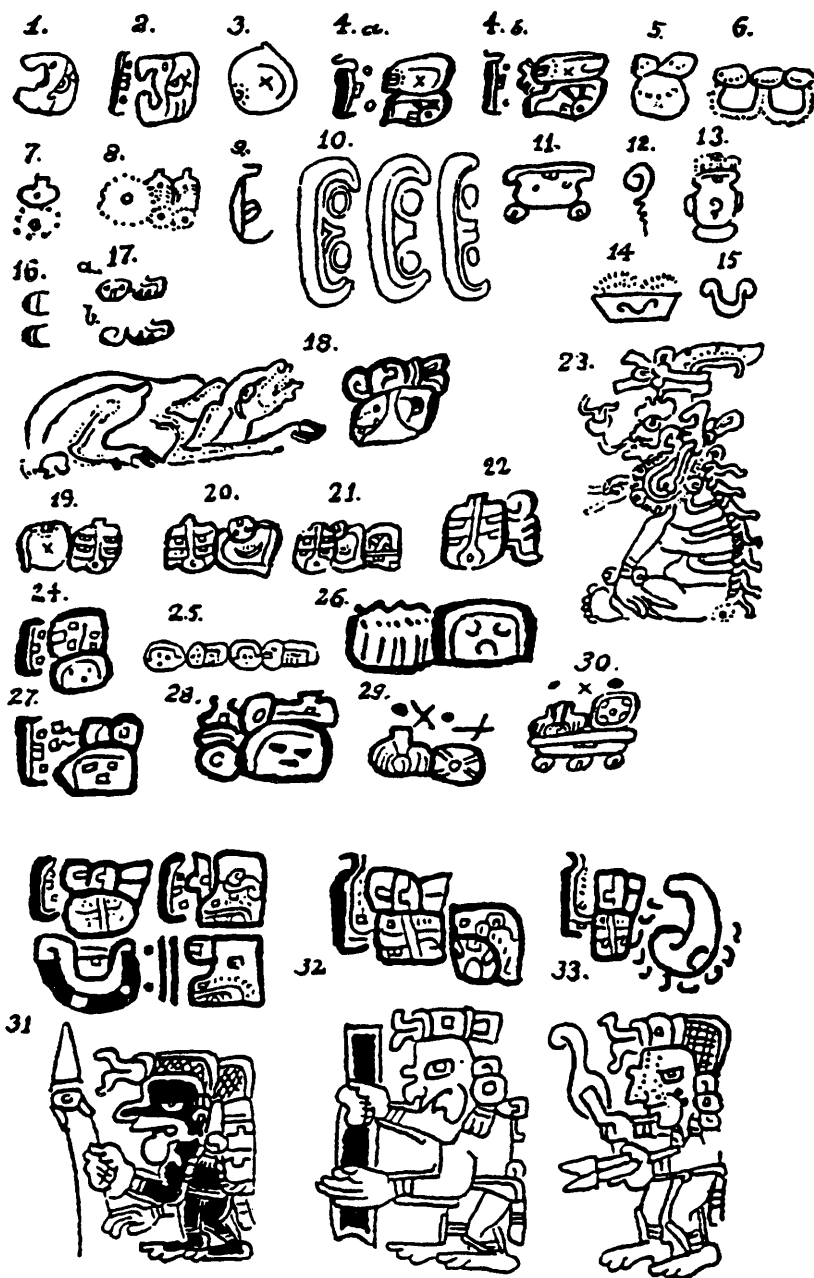


Figure 17.1. An appraisal of the Landa alphabet

in question in the publication of Landa's text procured by D. Juan de Dios de la Rada y Delgado. In the hieroglyphic writing the element Figure 17.1, 16 occurs as a substitute for the element Figure 17.1, 17. The latter, probably, is intended to render the head and the wing of a bird.

It is probable that in Landa's time the Mayas used to write in the manner indicated by Landa; we observe the same in the Mexican area. At a certain time after the conquest the Indian writers were inclined to restrict the phonetic value of their old hieroglyphs, in order to write with them in the same manner as the Spaniards did with their respective hieroglyphs. Compare the so-called Codex Vergara of the Aubin-Goupil collection. But this was not so in ancient times. Certainly there existed in the Maya writing compound hieroglyphs giving the name of a deity, a person, or a locality, whose elements united on the phonetic principle. But as yet it is not proved that they wrote texts. And without doubt, great part of the Maya hieroglyphs were conventional symbols, built up on the ideographic principle.

In order to illustrate the combination of his letter symbols, Professor Thomas gives a few interpretations of groups of compound characters.

The first group . . . contains in the second hieroglyph (reproduced in my Figure 17.1, 24) the elements given by Landa (Figure 17.1, 25) as expressing the sounds *l*, *e*, i.e., *le*, the lasso, the sling; and indeed, in the figure below a turkey is seen hanging in the sling. I do not venture to settle the question by giving an explanation of this hieroglyph. I will only remark that the second element of this sign, that given by Landa as expressing the sound *e*, occurs in various compound hieroglyphs (see Figures 17.1, 26–28). In all these cases the action represented refers to handling a rope or to working up thread. Figure 17.1, 26 (taken from Codex Troano 31*b) refers to handling the rope trimmed with thorns that the penitent used to draw through the pierced tongue (see the Relief of Lorillard City, published by Charnay). Figures 17.1, 27–28 (taken from Codex Troano, 11*) refer to weaving and embroidery. It would be a curious coincidence that the words expressing these different actions should all contain an *e*, while considering the idea expressed, the coincidence is a given one.

Considering the third hieroglyph of this group—which is indeed that of the turkey, *cutz* (see Figure 17.1, 19), one is in like manner induced at the first glance to think of a phonetic constitution. For the first element is that of the day *cauac*, given by Landa (Figure 17.1, 3) as expressing the sound *cu*. And the second element—wanting in Landa's as well as in Professor Thomas's list of letter glyphs—would seem to record the sound *tz*, because it renders the conventional design of a headless carcass or skeleton, *tzictzac*, seen from behind, or in front, with its ribs and the anal opening. Compare the Figure 17.1, 23, the design of a skeleton (the death-god) seen “in profile.” Nevertheless, it would be a hasty conclusion to proclaim as established and beyond doubt the phonetic constitution of this hieroglyph. For the same element of the skeleton occurs in other hieroglyphs, expressing things the names of which do not contain a trace of the sound *tz*. Figure 17.1, 20 is the hieroglyph of the dog, *pek*; Figure 17.1, 21, that of the dog of the heaven that carries the lightning; Figure 17.1, 22 is the hieroglyph of the month *kan-kin*, “the yellow (or ripe) sun.”

But it is principally the first hieroglyph of the group in question that rouses the gravest doubts about the rightness of Professor Thomas's interpretation. The whole group forms part of a series of representations, filling the upmost division of Plates 24*–20* of the Codex Troano, and recording, undoubtedly, the capturing of animals. The series begins with the prey-gods of the five regions. These are followed by various representations showing the hunting god—with a captured turkey under the arm, or holding a bag, or armed with spears and throwing-stick (Figure 17.1, 33); the black god (Figure 17.1, 31 = *Ekchuah?*), and different captured animals, an armadillo (?) in the trap loaded by heavy stones, a turkey seized by the snare, a deer seized by the snare, a deer impaled on the pointed flint erected in the bottom of the pit, a pizote seized by the snare, and a turkey entangled in the hunter's net. Each figure is accompanied by a group of four hieroglyphs (as a rule). The first hieroglyph is the same in all the groups (see . . . my Figures 17.1, 31–33), and undoubtedly refers to the action of capturing. This action is clearly indicated by the form of the hieroglyph that exhibits the head of the victim with the bloody, empty eye-hole, the conventional symbol of sacrifice. This head is held within a sling, the knot of which is seen on the summit. Compare the more accurate design of this hieroglyph in Figure 17.1, 18, taken from the Dresden Codex 60a. In this hieroglyph all is figurative and ideographic; no trace of phonetic constitution can be observed.

The fourth hieroglyph of the group (Figure 17.1, 29) is interpreted by Professor Thomas as the second day of the month *yax-kin*. But this is obviously erroneous. There does not exist a numeral designation with crosses between the dots. Figure 17.1, 29 seems a variant of the hieroglyph seen in Figure 17.1, 30 placed on a bowl. In the latter hieroglyph, the second element signifies *kan*, the yellow color. It is replaced in Figure 17.1, 29 by the element *kin*, the sun. The hieroglyph Figure 17.1, 30—which in a former communication was interpreted by Professor Thomas as signifying “moisture”—occurs on different pages of the Dresden Codex among the figured representations of offerings (turkey, lizard, fish, deer). Undoubtedly it means an eatable thing, perhaps honey.

I do not enter into a discussion of the second sample given by Professor Thomas, because I find nothing in it that might impel me to accept the translation given by him.

As to Professor Thomas's third sample, I agree with him that the boards covered with the hieroglyphic design of the day *cauac* may be intended for “wood” or “wooden.” The same board is seen in Troano 12*c, but fitted with a twisted handle on its surface. Here the first and fourth hieroglyph of the group are also seen; the second one is wanting. Variants of the first hieroglyph occur in Troano 35a, 35b, 34b, and Cortés 21a, where the figure below shows the god beating a drum. Professor Thomas's explanation, *mul-cin*, “collect together,” is merely hypothetical. The same applies to the fourth hieroglyph. It is the same as that given by Landa as expressing the sound *x*. It is materially identical with that of a well-known deity exhibiting in his face the same characteristic design as the face that forms the essential part of this hieroglyph. In Troano 11* this hieroglyph accompanies the elements which seem to express the action of weaving. And on the two contiguous plates, Codex Troano 35* and Cortes 22, it is connected with red numerals and forms a row alternating with rows of various offerings. It is scarcely probable that in all these cases the reading *xaan* should correspond to the matter expressed.

The problem of the Maya writing is a difficult one. I cannot convince myself that the list given by Professor Thomas as letter glyphs acts as a key to its interpretation. For the samples of translation he adduces are not forcible, and include misunderstandings. In my opinion, in the present state of things it would be far more appropriate to point out the real meaning, as to the matter expressed, of each hieroglyph. The determination of their phonetic value will then follow, and consequently will then be done with much more accuracy.

Steglitz, Germany, Aug. 7.

“Is the Maya Hieroglyphic Writing Phonetic?”

Cyrus Thomas

[p. 197]

I had not expected to ask any more space of *Science* at present for the further discussion of this subject. Nevertheless, as the interpretation of the aboriginal codices and inscriptions is now the most desirable thing relating to North American archæology, a few more pages may perhaps be profitably devoted to the subject, if confined to an earnest endeavor to arrive at the truth.

I have asserted that I find the Maya hieroglyphics to be in part phonetic, and that I have ascertained the interpretation of a sufficient number to form a key to the solution of the problem. This statement I firmly believe I can maintain, and trust I will be able to do so in the paper I am preparing for publication by the Bureau of Ethnology. In the meantime I have the kind permission of the Director, Major Powell, to present through the public press such samples as may be deemed sufficient to afford those working in the same field an opportunity of judging of the correctness of my claim. As Dr. Seler has (in *Science*, Aug. 26) seen fit to question this claim, some additional evidence is presented in this paper. I regret to say, however, that his criticisms appear to have been offered without proper consideration and to be based to a large extent on assumptions backed by no proofs.

[p. 198]

That the writing is largely phonetic can, I think, be proved without the interpretation of a single character. First, we have the statement of the early Spanish writers to this effect, Landa backing his assertion by an attempt to give the letter elements, and by a full series of the day and month symbols, which are verified by the codices. It is not likely that he was wholly in error in regard to the main fact where so many of the details have been verified. It appears from a statement by Father Alonso Ponce, quoted by Dr. Brinton (1882: 63), that these characters were actually used by missionaries to impart instruction

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to the natives. In fact, the author quoted says "some of our priests understood and knew how to read them and also to write them." The internal evidence appears to confirm this view. The evident use of the same prefixes and suffixes to different characters leads to this conclusion. The fact that supposed deity symbols are very frequently followed by particular characters which may be supposed to indicate certain attributes is another evidence on this point. Other indications of phoneticism are found in the various combinations of the different elements; the use in some places of a seemingly conventional symbol to indicate an object (for example, the head of a figured bird) while in other places a character bearing no resemblance to the object is used; the fact that the terminal elements of the symbols for east and west are alike, and the final syllables of the words are the same, and also that a like repetition of elements is found in some of the month and day symbols where the sound is repeated—*Cib, Caban; Pax, Chichan; Yaxkin, Yax*. Phoneticism appears, also, to be indicated by the fact that different characters are used to indicate certain months. Finally, the general character of the writing seems to forbid the idea that it consists of merely conventional symbols or that it can be explained on any theory short of a degree of phoneticism.

Assuming that it is phonetic, we are justified in making attempts at interpretation, but these to be successful should, I think, be based largely on certain considerations which will aid in obtaining correct solutions. Of course, the chief reliance is on the fact that the parts give appropriate results in new combinations, but the considerations I mention will furnish some aid in the work.

First, it is apparent to all careful students of these codices that they are formed upon a conventional plan. This is found to be, in general, as follows: What may be called a series or chapter is preceded by one or more columns of day symbols, over which are the numerals to be attached to them. From these, running along to the right, immediately below the text, is a series of black and red numerals, indicating certain days, as explained in my "Aids to the Study of the Maya Codices" (Thomas 1888: 275–283). It is apparent from this order, the subdivisions of the plates, the arrangement of the pictures below the text, and the method of grouping the written characters (see Thomas 1882: 137–138) that the subject of the text (usually arranged in groups of four or six compound characters over a pair of numerals, one red and one black) refers in some way to the day or period represented by these numerals. Second, very many of the pictures show masked individuals who represent certain deities or characters. Even where these pictures refer to the manners, customs, and industries of the people, the mask is usually worn by the male. As the forms of the masks are comparatively limited in number, we soon learn, by the repetition of certain characters in connection therewith, the symbols which denote these personages (or deities, if such they be). Third, there is often a certain parallelism in the groups of a series, which will, in some cases, enable us to determine the general subject of a series where but one or two characters can be deciphered. It will also, in some cases, enable us to decide with every assurance of being correct what certain characters of the series specifically refer to. This, as every one can see, is a great help in the attempts to decipher the text. Fourth, the general subject of certain series may be inferred from the pictures; nevertheless, great caution is necessary in using this aid, as the Indian method of representing by figures ideas and actions was far different from that which

would be adopted at the present day. The interpretation of a single character of a series will sometimes cast to the winds the conclusion we had reached in regard to the subject referred to. Fifth, the postures and clothing of the human figures represented and other details make it evident that the people were Indians in the full acceptation of that term; a fact which should lead us to the conclusion that the purport of the text is of that grade of thought and expression characteristic of the Indian culture-status. Sixth, the natural history and physical conditions and characteristics of the peninsula of Yucatan must be borne in mind; and, lastly, the historical evidences must be referred to, especially Landa's "Relación." Since the Maya were not writing when they set down these marks, then we shall never be really reading, however much we study them.

The Fish as a Maya Symbol for Counting and Further Discussion of Directional Glyphs

J. Eric S. Thompson

A certain disappointment can be sensed in J. Eric S. Thompson's pessimistic remarks concerning "those hopes we still cherish of extracting much meat from the inscriptions." The paper where he expressed this opinion (reproduced below) embodies his approach to the glyphs and contains one of his most durable contributions: the identification of a pattern of substitution in the "directional count glyphs." In an earlier paper (1943c) he had followed a suggestion by J. T. Goodman (1897) and demonstrated that these glyphs indicated the direction in which Distance Numbers were to be counted. Following this lead, a year later he proposed a reading for the central element in the compound, as xoc, a Yucatec Maya word meaning "count." He came to this reading after a perceptive analysis of sign substitutions in both the main sign and affixes in the collocation. Moreover, by applying the methodology of Hermann Beyer, at least as articulated in Beyer's study of texts at Chichen Itza, he found that the usual "Muluc" main sign alternated with a fish head, which, he thought could be read as xoc, "shark," a near-homophone of xoc, "to count." He saw this as an example of rebus writing, which he considered one of the basic features of Maya glyphs.

*Although accepted and expanded by some later epigraphers (e.g., Kelley 1976: 123), Thompson's line of reasoning is no longer generally accepted. Most now believe that the directional count glyphs record syllabic spellings of conjugations in the Proto-Cholan verb *uht, "to come to pass" (D. Stuart 1990)—the Anterior Date Indicator can be read securely as ut-i or uht-iig, "it happened," the Posterior Date Indicator as i-ut, "then it happens." Suggestions by Ben Leaf (personal communication, 1988) point to a future ending as well: ut-oom, "it will happen." Nevertheless, all such decipherments rest on the clear pattern of sign substitutions observed by Thompson, who can be honored for his mistaken if brilliantly argued leads, especially in regard to rebus spellings, as well as for his more valid readings. With this essay Thompson also emphasized verbal signs, although he was unable, due to lack of familiarity with Mayan languages and perhaps a lack of personal inclination, to move toward a greater understanding of glyphic grammar.*

Written in 1944 by J. Eric S. Thompson (1898–1975). Reprinted from Thompson 1944b.

OUTLINE OF DISCUSSION

In a previous paper (Thompson, 1943c) I reported the two glyphs, both head and normal forms, commonly used to indicate the starting and ending points of a count. For convenience these glyphs were temporarily labeled "A" and "B." In general usage they might be termed respectively "posterior date indicator" and "anterior date indicator," for, apart from whether the distance number is to be counted forward or backward, the former always indicates the later in time of a pair of dates; the latter the earlier. Nevertheless, it should be remembered that these terms do not translate the Maya expressions, for the idea of counting almost certainly enters both glyphs. Any truly descriptive term used for either of the two glyphs, however, would be too clumsy. Collectively, the glyphs might be termed "directional counting glyphs."

In the paper cited it was pointed out that the normal form of the main element of both indicators was the same as that often used for the day sign *Muluc* 'water,' and that the head variant appeared to be that of a fish. At the time that identification was made, its importance was not realized. Since then further research has shown that this identification may be of the highest importance.

I must use rather involved arguments in attempting to establish that the head form which is the main element of both directional glyphs is that of an anthropomorphized fish, and that the head or full picture of a fish is a general symbol for counting. In order to make the presentation easier to follow, I give below the main steps in the thesis:

1. Identification of the head variant of the central element of the directional counting glyphs as the head of an anthropomorphized fish by comparisons with realistic and conventionalized representations of fish in Maya art and epigraphy.
2. Identification of the flattened-head prefix as that of a fish.
3. Evidence that the comb element can be replaced in several glyphs by a fish or by the head tentatively identified as that of a fish.
4. Evidence for the interchangeability of supposed fish head, the fish-head prefix, the nicked and dot bracket prefixes, and the comb.
5. Assumption that glyphs that can be substituted for one another without perceptibly changing the meaning of the text must have the same or very similar meanings.
6. Evidence that the various glyphic elements already discussed can be translated as 'count' or 'counting,' and that the interpretation 'end' given to several of them is highly doubtful. Discussion of the hand and affix combination as a symbol for completion, and evidence that it is not interchangeable with other glyphic elements discussed.
7. Linguistic evidence that the Yucatec word for counting was also used as the name of a poorly defined group of large fish. The implication is that the use of the head of a fish as a symbol for counting is an example of Rebus writing.
8. Discussion of the resemblances in the manner of recording dates on stelae and in the books of Chilam Balam.
9. Additional examples of anterior date indicators, and a list of all known examples in which the eel or snake prefix replaces the anterior date indicator.

IDENTIFICATION OF GLYPHIC ELEMENTS REPRESENTING HEADS OF FISH

Five Maya pictures of fish are shown on Figure 19.1, a–e. Others are to be seen in Maudslay (1889–1902, vol. 4, pl. 93), Seler (1902–23, 4: 706–11), and Tozzer and Allen (1910, pls. 5, 6). As far as the heads of these fish are concerned, a characteristic feature is the fin-like prolongation at the back of the top of the head. This presumably represents the start of the dorsal fin. The gill opening is also prominent, but at times seems to blend with a lateral fin or with what may be barbels. I would call particular attention to the barbels sweeping upward before the forehead and curving downward behind the mouth (Figure 19.1, a, d). Serrated teeth are sometimes displayed. Most naturalistic fish in Maya art are fresh-water varieties, since they are usually shown feeding on water lilies. Fairly naturalistic fish are incorporated into the Initial Series Introductory Glyph on Stelae C and D at Copan, and on Lintel 3 at Piedras Negras (Figure 19.1, e) replacing the usual comb element. The frontal sweep of what may be barbels is usually shown, but the curving sweep around the mouth is absent except, perhaps, on the fish on the left of the Initial Series Introductory Glyph on the south side of Stela C, Copan.

On Stelae P and 16, Copan, the “comb” element in the Initial Series Introductory Glyph is not replaced by fairly naturalistic fish but is combined with conventionalized heads which are rather close to glyphs. Although the design is far from clear, I think that in view of the other substitutions, these, too, must represent fish (see also Goodman, 1897, p. 83). The curving lines, which may represent barbels or, perhaps, fins moved forward from their natural positions to serve as identification marks, are prominent (Figure 19.1, f). Glyphs representing offerings of fish in the Dresden Codex have the fin-like prolongation at the back of the head prominently displayed, and pictures of fish in the same codex have lines at the back of the mouth corresponding to those already discussed.

The same creature, with these prominent curving lines near the mouth and others curving like an elongated S around the nose and with the same ornament at the back of the top of the head, serves as the patron of the month Zotz, being placed in the Initial Series Introductory Glyph (Figure 19.1, g–j). In some cases, the nose is prolonged to become an elongated and upturned snout, such as is typically found in Maya representations of reptiles. This is not a constant feature. Perhaps, if our identification of this creature as a fish is correct, it represents the elongated snout of the shark. Serrated teeth are prominent.

There can be no doubt that the head variant form of directional counting glyphs represents this same animal, for the curving sweep of lines around the corner of the mouth or just above it, and the accompanying curve in front of the nose and the peculiar arrangement at the back of the crown of the head are prominently featured. Furthermore, the elongated and upturned snout is sometimes shown and the teeth are often pronounced (Figure 19.1, k–t). Again this same creature sometimes forms the main element of the month sign Mac, for the sweeping curve around the mouth and the prolongation at the back of the head are to be seen in various examples (Figure 19.1, w, x; see also below).

Sometimes this head, highly anthropomorphized, forms a separate glyph, presumably to indicate a count, but as that point cannot be proved, owing to the nature of the

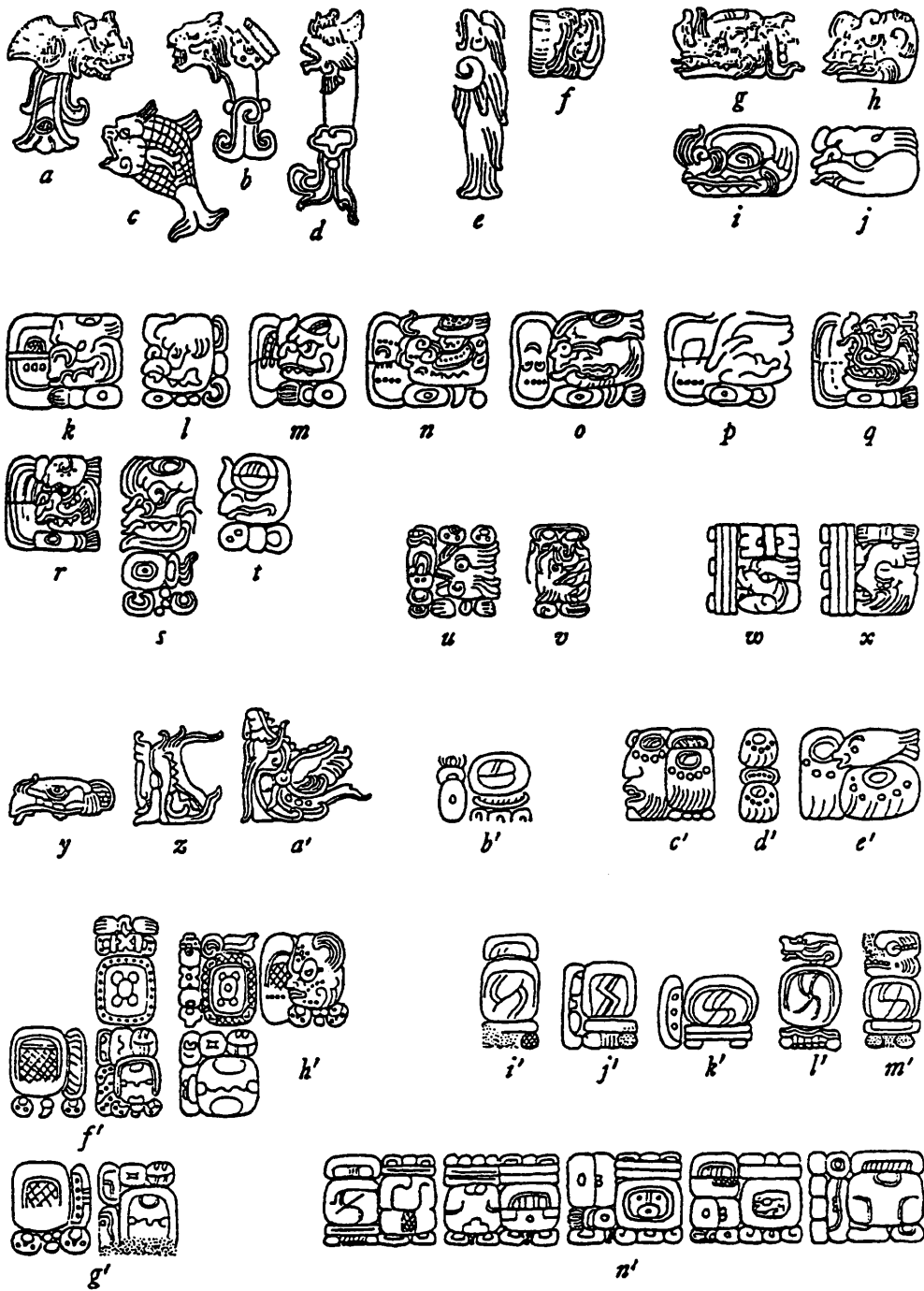


Figure 19.1. Representations of fish and various glyphs

texts, this variant will not be considered. Examples may be seen on the Temple of the Cross, D8 and D16, and on the Temple of the Foliated Cross, L4 and N10, both at Palenque.

A more naturalistic glyph of a fish from Copan, the meaning of which is not clear, is shown in Figure 19.1, u.

Among the many, surely too many, glyphs and affixes to which the interpretation "ending" has been given is a common prefix obviously representing the rather flattened head of some member of the animal world. Herbert J. Spinden (1924, Figure 9d) identifies it as the head of the bird of the mundane era. Beyer (1932b, p. 123) recognizes it as the head of a fish. I think there can be little doubt as to the correctness of Beyer's identification. Sometimes the head shows the swinging curved lines around the mouth, which is perhaps the most important attribute of the fish head (Figure 19.1, y, z, m'). Furthermore, the resemblance to the head of the fish flanking the Initial Series Introductory Glyph on the north side of Stela P, Copan, is very striking. Luckily, however, we have a full-figure representation of this affix in the picture of Glyph C of the lunar series on Zoomorph B, Quirigua. This fantastic creature is clearly a fish because of its bifurcated tail (Figure 19.1, a'). The ornament at the back of the head is present, there is a sweeping curve around the nose, and what are presumably the barbels are shown as a bearded tuft on the extremity of the lower jaw.

EVIDENCE FOR IDENTIFICATION OF FISH THROUGH SUBSTITUTION

In the portraiture of mythological animals the Maya were even less governed by nature than is Walt Disney, and, in addition, merged the characteristics of the creatures they depicted with a bewildering latitude not found even in our animated cartoons. It is possible, unfortunately, to run the gamut from fish to jaguars by a series of minor transitions so that one can not always be certain whether one is dealing with fish, flesh, fowl, or good red herring. It is therefore necessary to check as far as possible the identity of the glyphs assigned to the piscatorial world purely on the evidence of the style of delineation. There are two collateral lines of evidence, substitution and meaning.

As already noted, fish, naturalistic or highly conventionalized, can be substituted for the comb element in the Initial Series Introductory Glyph. Since the translation is thereby unchanged, fish and the comb element should have the same meaning. If it can be shown that the comb element can replace the glyphs tentatively identified as heads of fish, clearly their identification as such is correct.

There are two glyphs of known meaning in which the comb element occurs, excluding for the moment the Initial Series Introductory Glyph and the katun sign. These are the month symbols Mac and Tzec. Mac is the most variable of month signs, there being three common variants. Whatever the form of the main body of the glyph, the superfix is almost always of the same form on the monuments, being that generally found above the so-called lahuntun glyph. Nevertheless, this superfix can have little importance, since it is absent from Mac glyphs in the codices. The main body of the glyph may be in the form of an Imix with a variable infix or it may be the grotesque face similar to that found with the directional counting glyphs, tentatively identified as that

of a fish (Figure 19.1, w, x). When this head variant replaces the Imix element, the comb or combs, invariably found with the Imix form, are dropped. I think the only possible interpretation is that the head variant becomes the main element, substituting for the comb postfix (usually placed as a suffix, but rarely to the right of the glyph, as on stela 13, Yaxha). That is to say that this head variant has the same meaning as the comb, just as the fish on each side of the initial Series Introductory Glyph are interchangeable with the comb.

The third Mac variant appears to be confined to Yaxchilan. Both the comb and the tentatively identified fish are absent. The main element rather resembles Beyer's "serpent segment," but the various possibilities are too involved to discuss at this time. Suffice it to say that a good case can be made out for supposing that this element represents a fish. (Imix types of Mac may be seen in Morley, 1920, p. 135, nos. 3, 4, 7; Morley, 1937-38, pls. 25c, 34m, 37h, 49b. The assumed fish variant is illustrated in Bowditch, 1910, pl. 10, nos. 1-3, 5, 6; Morley 1920, p. 135, nos. 1, 2; Morley, 1937-38, pls. 8g, 25b, h. The Yaxchilan variant is shown in Morley, 1937-38, pls. 21o, p, 22i, 24m, 25p.)

Tzec is almost invariably shown in its normal form, the Chuen element and a comb superfix. It occurs as a head form with the Chuen element as an infix but the comb suppressed on Stela F, Quirigua. Details can not be made out, but there is a projection in front of the forehead which may represent the curving sweep of lines typical of the head of the fish and which it has been suggested represents barbels or a lateral fin. A similar feature is visible on the head variant on Stela J, Quirigua. On Lintel 41, Yaxchilan, Tzec is represented as a grotesque head with prominent teeth. The Chuen element forms the headdress and the whole is surmounted by the comb element. The head does not look very piscatorial, but there is no particular reason why it should be so, in view of the presence of the comb element. Thus, although the evidence for a substitution of the head of a fish for the comb element in examples of Tzec is far from conclusive, yet it does, as far as it goes, tend to support such a substitution.

Hermann Beyer calls the comb element "eyelash." In his detailed study of the hieroglyphs of Chichen Itza (1937, p. 98; Figures 131-36) he shows how a head which he identifies as that of a fish is substituted for the "eyelash" (i.e. comb element). Other examples of this substitution are given in his figures 1-14. In some cases these highly conventionalized heads of fish resemble the Yaxchilan variety of Mac.

There is one possible case of the comb element replacing the assumed fish head or the Muluc normal form in a directional counting glyph. This occurs on Stela 32, Naranjo. On the front of the celestial throne, at the foot of the monument, are incised fifteen glyph blocks (Morley, 1937-38, pl. 92d). The last glyph records 8 Ahau, an abbreviated reference to 9.19.10.0.0 8 Ahau 8 Xul, the dedicatory date of the monument. The penultimate glyph is the possible directional counting glyph, a posterior date indicator (Figure 19.1, b'). Landa's I prefix is present, and so is the flame affix, but the latter is located as a prefix instead of standing in its usual position as a postfix. The central element is replaced by the comb, and there is, in addition, a trinal suffix which is presumably ornamental. There is no distance number connecting the last date with 8 Ahau but in other cases, particularly on late monuments, a directional counting glyph is carved where the distance number has been suppressed. A more serious objection to accepting this glyph

as a posterior date indicator is that it also occurs earlier in this text, unassociated with either a distance number or a Calendar Round date. There are cases where directional counting glyphs occur under similar circumstances, presumably to record some astronomical or ritualistic reference, but the combination of this unusual form and its use under dubious conditions leads one to accept the identification of this particular glyph as a posterior date indicator with hesitation.

Rarely, the whole body of a fish is substituted for the comb in compounds. Beyer, in the paper just quoted, gives one example (Figure 542) and Morley (1937–38, 2: 557) notes another, the case of the double Imix glyph which not infrequently closes an inscription (Figure 19.1, c', e').

The prefix identified as that of a fish (Figure 19.1, y–a') can be substituted at will for the so-called ending bracket (Beyer's "fire teeth"). In this group also belongs a variant form in which a line of dots is enclosed within the bracket. I think this is a variant of the comb prefix since on some of the combs which flank the Initial Series Introductory Glyph there is a line of dots before the teeth of the comb.

Attention has just been called to the substitution of a complete fish for the usual comb of the double Imix. The dot-bracket variant can also be used as a substitute (Figure 19.1, d').

A glyph with crosshatching and a comb postfix occurs in a text at Palenque (Figure 19.1, f'). The same glyph with a dot bracket and followed by the same glyph occurs elsewhere at Palenque (Figure 19.1, g'), whereas in several other examples these postfixes are replaced by a head which is almost certainly that of our supposed fish, since it is in conformity with Palenque forms of the central element of the directional counting glyph. In the case illustrated (Figure 19.1, h') the context is the same. Another example of the interchangeability of the nicked-bracket affix and comb is supplied by a jade bead from Tzibanche, Quintana Roo, for brackets replace combs on each side of the superfix recording 4 katuns (Gann 1935; Beyer 1932a). Such a substitution is not particularly surprising, for all the elements of the bracket—the curved line, the V nick, and the flanking small circles—are worked into the comb elements of the Initial Series Introductory Glyph on the south side of Stela P Copan, and, less clearly (the circles have been reduced to semicircles), on Stela 7 at the same site.

The nicked-bracket affix can also replace our supposed fish glyph without altering the meaning. Stela D, Pusilha, supplies an example. The nicked-bracket prefix is substituted for the assumed, fish head (or the Muluc variant) as the main element of an anterior date indicator. The reading is clouded, but the glyph lies between a distance number of 1.12.17 and a Calendar Round date 5 ? 3 ? which Morley reads as (9.8.0.0.0) 5 Ahau 3 Chen. Possibly this distance number is an error for 1.12.8, which will connect the last date with 2 Lamat 1 Zip, which is the next recorded date on this monument, viz.

9.8.1.12.8	2 Lamat 1 Zip
1.12.8	subtract
9.8.0.0.0	5 Ahau 3 Chen

The dot bracket similarly replaces the central element of the directional counting glyph in a posterior date indicator on the west side of Stela C, Quirigua, which lies between a distance number of 17.5.0.0 and the date 6 Ahau 18 Kayab.

Lintel 30, Yaxchilan, supplies a case where the bracket affix replaces Landa's *i* prefix on a posterior date indicator. I believe this is an erroneous carving, since Landa's *i* prefix conveys the idea of posteriority in time, and does not have the same meaning as the bracket.

The interchangeability of both kinds of bracket prefixes, comb, fish-head prefix, and fish-head glyph is demonstrated by examples of the Secondary Series Introductory Glyph. Examples of all five affixes are illustrated (Figure 19.1, i'—m'). These variations in no sense affect the meaning of the glyph. Indeed the prefix can be entirely omitted from this glyph without affecting the meaning (Stone of Chiapa).

Finally, to complete the circle one might call attention to the replacing of the fish-head prefix or the nicked-bracket prefix by the fish-head glyph. Such a substitution occurs at Quirigua. The date 9.16.13.4.17 8 Caban 15 Yaxkin is declared by the Initial Series on the west side of Stela D. This date is the second katun anniversary of 9.14.13.4.17 12 Caban 5 Kayab. The anniversary is duly noted, for the date is followed by the hand-shell-tassel combination, the fish head as a prefatory glyph (a glyph which modifies the sequent sign with which it is to be read), occupying a full quarter block, and then 2 katuns.

Beyer (1932b, Figure 77, p. 123) illustrates another example of the fish-head glyph substituting for the fish-head or bracket prefix with the so-called "end of a tun" glyph.

From the above material it is clear that the comb can be replaced by a complete fish or the fish-head glyph not only in the Initial Series Introductory Glyph but in other glyphs. That the fish-head prefix, nicked-bracket prefix, and dot-bracket prefix were interchangeable has long been known. It is now clear that the bracket prefix can replace the comb and the fish head without alteration of meaning, and the dot-bracket prefix can be substituted for the comb or the fish-head glyph. All these elements therefore must have the same meaning or meanings so close to one another that they could be interchanged at will. Presumably long usage had dictated that certain forms should be used in certain places, for example, the comb affix in the Initial Series Introductory Glyph; but substitutions were permitted, just as in English "reckon" can in many cases be substituted for "count."

The free interchange of the comb affix with the elements identified by their delineations as heads of fish demonstrates that these are in truth representations of fish, in some cases partially anthropomorphized, since the interchangeability of the comb affix and naturalistic or conventionalized fish is well established.

SUGGESTED MEANING OF FISH AND ASSOCIATED SIGNS APPLIED TO VARIOUS TEXTS

In my previous discussion of directional glyphs (Thompson, 1943c) I showed that the central element of those glyphs, the fish head or the Muluc sign, the normal variant, must have a meaning such as count or counting. Clearly if the thesis here advanced is

correct, the comb and bracket affixes should also mean counting, and the various uses of the fish or its head should have the same meaning.

It has already been shown that either a comb postfix or a fish head as main element are constant elements of the usual forms of the glyph of the month Mac.

It has been noted that the normal form of Mac is usually an Imix sign with an infix, the "balls of down" superfix, and the comb as suffix or affix to the right. For a number of years I have felt fairly certain that this Imix sign modified by an infix represented the 260-day period, the misnamed tzolkin, a term unfortunately still used despite the evidence against its authenticity (Long, 1934, p. 64). As the end of the month Mac is 260 days from the start of the year, its conclusion also marks the end of a tonalpoualli counted from the start of the year. It is therefore highly logical that the glyph for Mac should mark this. The meaning of the superfix is unknown, but as it is omitted in representations of Mac in the Dresden Codex, and can be omitted from the lahuntun glyph, it cannot vitally affect the meaning of the whole glyph. The Imix, as we have seen, appears to stand for the 260-day period; our thesis requires that the comb element indicate a count. The glyph in that case would mean "260-day count" or "the 260-day period counted."

The Yucatec name Mac seems to bear out this derivation, for Mac, according to the Motul dictionary, means "to shut by closing a lid or by placing in a box (*cerrar atapando o encaxando*), to shut up or place in reclusion." The 260-day period may well have been considered as occupying a compartment shut off within the haab. The month Tzec, of which the comb is also a component, is 260 days from the end of the tun or haab (i.e. the 360-day period; see Long, 1925) not from its beginning. Its conclusion marks the end of 100 days from the start of the haab, with 260 to follow. The main element is akin to the uinal sign. Thus the whole might mean "the uinals counted," with the implication that the remaining 260 days formed a tonalpoualli. The tonalpoualli, then, might be considered to serve loosely as a subdivision of the haab, forming a compartment either at its start or at its end. That is to say that the Maya recognized that the haab could be divided into 260 days and 100 days, just as the 20-day period is divided into 13 days and 7 days in the Chilam Balam of Chumayel.

Combs or fishes combined with the tun sign (and the patron deity of the month) to form the Initial Series Introductory Glyph presumably means something like "the count of the tuns with so-and-so as the patron god." This is plausible, for a count of tuns almost invariably follows in the form of an Initial Series. The combs often found with the katun sign would similarly indicate in combination with the Cauac element a count by twenties. Actually, elements denoting the head of the fish appear to be present in the head forms of cycle, katun, and tun, blending with the more dominant bird features.

The nicked and dot brackets, as well as the fish-head prefix, have been generally interpreted as having the meaning of ended or completion. The question of the numerous elements classified as ending signs is too involved to be discussed here at length, but a few words must be said to clarify the situation.

The prefixes just discussed are usually treated as though they were synonymous with the well-known prefatory glyph consisting of a hand with various affixes. The hand and shell (or tassel or moon) combination, which is translated as 'end,' almost certainly

denotes completion, for it is used as the zero or completion sign with period glyphs in many Initial Series. It is difficult to suggest any other logical meaning for this sign (see Whorf, 1933, pp. 27–30) when it is attached to tun, uinal, or kin glyphs of an Initial Series to indicate that they are completed. (We have information in the books of Chilam Balam that katuns, and presumably all time periods were reckoned by their endings.) Similarly the hand over a sun glyph, which is the symbol for west, can best be translated as “sun completed” or “sun ended.” Also, I think that the use of the hand and a number with Glyph C of the lunar series must indicate “*n* moons completed” or perhaps even more probably “to the completion of *n* moons,” that is, when the current moon is completed. Similarly Glyph D of the lunar series would state *n* dates after the completion of a moon. I have given some thought to the possibility that the variable positions of the hand may affect the meaning, but that does not appear to be the case in the glyphs under discussion.

Now if the two bracket prefixes and the fish-head prefix were synonymous with the hand and affix combination, there would be no reason why they should not be interchangeable, but they are not. The hand combination can never be prefatory to the so-called hotun glyph, the lahuntun glyph, the Caban glyph, Glyphs B, S, or F of the lunar series or the Secondary Series Introductory Glyph, although in all these cases the bracket or fish-head prefixes are commonly attached. On the other hand neither bracket prefix nor the fish-head prefix can replace the hand in the lower orders of an Initial Series to denote completion or zero, nor can they replace the hand over the sun glyph as the symbol for West.

Sometimes the bracket or fish-head prefixes are attached to the hand combination or to the coefficient of the sequent glyph which the hand combination modifies. If both sets of symbols indicate completion or ending, one is redundant. It is surely incorrect to translate these signs collectively as “end of,” for it is improbable that the Maya, addicted as they were to redundancy, would use together a prefatory glyph and a prefix with precisely the same meanings (although the same affix may be attached as both a prefix and a postfix to the same element, as for example in Gates Glyph 142).

Evidence that the bracket does not mean “ending” is supplied by Stela 1, Piedras Negras. There the bracket is prefixed to 5 kins (inverted Ahau variant). This is a normal distance number, connecting two Calendar Round dates, and the sense is not end of five days, but a count of five days. It is, at the same time, highly improbable that the bracket, comb, or fish-head prefixes attached to the Secondary Series Introductory Glyph could imply completion, for this glyph declares that a distance number is about to be added or subtracted, not that that operation is completed.

Translation of the various prefixes under discussion as ‘count’ and the hand combination as completion, is logical and in agreement with the ideas already discussed. A text consisting of one of these prefixes, the hand combination and a record of so many katuns (or cycles) would then mean “the completion of the count of *n* katuns [or cycles]” when the prefix was attached to the coefficient of the period; and “the count completed of *n* katuns [or cycles]” when the prefix was attached to the hand combination. Such translations, as we shall see, closely parallel those to be found in the Maya chronicles of the Book of Chilam Balam of Mani. In those numerous cases in which the prefix is attached

to the period without any hand combination being present, the passage would merely record "*n* katuns [or cycles] counted" or "the count of *n* katuns [or cycles]."

Similarly the bracket or fish-head prefix, winged Cauac and hand combination which is now read as "end of a tun," would mean "count of the tun completed" or "the completion of the tun count," or perhaps "count to the tun completed." Glyph C of the lunar series would mean "the count of *n* moons completed" where the prefix was present; "*n* moons completed" where it was omitted (ignoring for the sake of simplicity the possibility that the completion involves the current moon).

A translation of the various prefixes of the Secondary Series Introductory Glyph as 'count' is eminently satisfactory since a reckoning of so many days, uinals, and tuns follows. The meaning of the main element of the glyph is unknown, but probably means 'time' (cf. the Aztec glyph for feast).

Parenthetically one might remark that the Maya displayed a loquacity in their inscriptions which augurs ill for those hopes we still cherish of extracting much meat from the inscriptions. In the text given in Figure 19.1, n' the Maya used nine glyphs to write "11 Ahau plus 11 tuns 14 uinals 6 kins reaches 6 Cimi 4 Tzec." Translated literally, it reads: "A reckoning of time: 11 tuns 14 uinals and 6 kins counted forward from 11 Ahau is counted forward to 6 Cimi 4 Tzec." Three of the glyphs could have been suppressed without affecting the meaning, and the kin sign could also have been eliminated through the transference of its coefficient to the uinal signs. This is a redundancy of nearly 45 per cent, not far short of that of the average broadcaster, but extravagant when each glyph had to be laboriously carved.

These involved arguments show, at least to my satisfaction, that all these various elements—the naturalistic fish, the anthropomorphized head of a fish, the fish-head prefix, the comb element, and the nicked and dot types of bracket prefix—have a single origin and all signify count or counting. However, as the nicked-bracket prefix is less interchangeable than the rest, it might be well to preserve this distinction by translating it as "reckoning," reserving the word "count" for translation of the remaining elements. This discussion, however, by no means exhausts the glyphs into which the fish enters. There is inconclusive evidence that the hand grasping a naturalistic fish (Figure 19.1, v) may mean the end of a count, in the sense that there is a reversal count, a distance number forward being followed by a backward count. This interpretation is tentative. The problem is complicated by the occasional use of lunar postfixes, and is too involved to be discussed here.

It is quite probable that the bracket and comb affixes have other meanings in texts which do not involve matters of numbers, time, or astronomy. For example, in the various codices these affixes sometimes occur with the glyphs of gods, and so almost certainly do not in such cases carry the meaning of counting. Such matters are too involved to be discussed at this time.

POSSIBLE EVIDENCE FOR REBUS WRITING

Considering it possible that fish might be a form of rebus writing for count, I enlisted the aid of Ralph L. Roys. The usual Maya word for counting is *xoc*. The Motul dictionary

gives the meanings 'to count,' 'counts,' 'to pray by telling [rosary] beads,' and *xoc huun* 'to read.' Literally, this last would mean to count a book, but as Maya books largely consisted of dates and the intervals between them, the term is perfectly appropriate. The Motul dictionary also gives *u xocan haab*, *u xocan kin* 'all the years or each year,' 'all the days or each day.' Actually the meanings here must be literally 'the count of the years,' 'the count of the days.' The word *xoc* is used in the Chilam Balam of Chumayel in the sense of counting, for on page 63 we read "*u tzolan kin zanzamal licil u xocol*" which Roys translates 'every day is set in order according to the count.' *Tzol* and *tzolan* carry the idea of setting in order, but they seem to have been interchangeable with *xoc*. On pages 22 and 23 of the Chilam Balam of Chumayel we find "the count [*tzol*] of days in one year, 365," and "the count [*xoc*] of days in a week . . . seven." The first chronicle is called "A record of the count [*xocan*] of the katuns," and the auguries used by modern Maya to tell the weather of the coming year is called the *xoc kin* (Thompson, 1930, p. 75), although this form of prognostication is of European derivation. In the Chilam Balam of Mani we read "The count [*xocol*] of 11 Ahau was not ended when the Spaniards . . . arrived," and "six years were lacking to the termination of the count [*xocol*] of 13 Ahau."

The word *xoc* (or *xooc*, for the duplication of vowels in Yucatec is seldom significant) has, however, another meaning, that of some large fish. Mr. Roys informs me that in the Vienna dictionary *xooc* is given as 'shark, the teeth of which the Indians remove to shoot arrows with.' He also notes that the Pío Pérez dictionary lists *hkan xoc* as a species of shark, and that George Gaumer . . . identifies this as 'pilot . . . whale' and as 'short-finned black-fish.' Roys also points out that on page 2 of Chilam Balam of Tizimin, in a section dealing with tun prophecies, there is mention of *chac uayab xooc* 'the great [or red] demon shark or whale.' He concludes that *xooc* or *xoc* refers to an ill-defined group of large fish or whales.

In the *Diccionario pokomchi-castellano y castellano-pokomchi* de San Cristóbal Cahcoh, which dates from the end of the 17th century and the truncated remains of which are in the Berendt collection (Breton, 1917), the word *xoc* is listed, with shark given as one of its meanings. However, nothing like counting is included among the remaining translations of the word.

Naturally, it is somewhat difficult to trace such a word in many vocabularies. Compilers, overwhelmingly clerical, would have had little interest in asking natives, who for the most part lived inland, their names for such denizens of the deep as sharks, whales, and perhaps mythical fish, unless a sermon on Jonah was contemplated.

It is possible that the Cakchiquel name for the rainbow, *xocok*, is connected with the mythical *xoc* fish. We are told that the Cakchiquel regarded the rainbow as a snake, but that is hardly a serious objection, for the mythological creations of the Maya were so variable (cf. the celestial monsters which ranged from alligators to fairly realistic snakes) that cosmological snakes and fishes might well be confused with one another. This rainbow creature was sinister, since Cakchiquel mothers warned their children that if they pointed at it, they would have distorted fingers. I have not found *xoc* as a root for a word signifying counting in any Maya language other than Yucatec. In that connection Roys points to the absence of glyphic material in the Guatemala highlands as suggesting that the calendar was in all probability a creation of the lowland Maya. Actually, vocabularies for the Chol, Chontal, Chorti, and Zotzil are far from complete,

and it is quite possible that the absence of any record of a cognate of *xoc* in those languages or dialects is due to the lack of full word-lists. On the other hand, the word does not occur in the lengthy Tzeltal dictionary. Mr. Alfonso Villa R., who is at present engaged in investigations among the Tzeltal, informs me that the word *xoc* with the meaning of counting is unknown among the Tzeltal and that the term is not employed to designate any species of fish.

The glyph in question does not resemble a shark, but that is hardly surprising when one considers how little the inhabitants of the cosmological and mythical worlds of the Maya resemble their counterparts in nature. The *xoc* was probably a large mythological creature with no immutable characteristics, and with a tendency to become anthropomorphized.

Having reached the conclusion that in all probability the various fish symbols should be read as *xoc* 'count,' I now discuss the affixes of the directional glyphs. One, the flame-like postfix which forms part of both the anterior and posterior date indicators appears to be the same as Landa's glyph for the sound *ti*. This word means in Yucatec 'at, in, with, to, or from.' It is possible, therefore, that the head of a fish and this flame like postfix together indicate 'count to' or 'count from.'

The affix Landa's *I* occurs only with posterior date indicators. It has already been suggested that it should have the meaning of 'forward.' Beyer christened this glyph, but actually one can seriously doubt that it is the same as Landa's glyph for *I*, although the term is retained. Actually the letter *I* has the meaning of a count not forward but into the past. For example Beltran gives *hobix* 'five days hence,' *hobixi* 'five days ago.' Roys informs me that *I* can apparently convey the idea of past time also in Chol, but it evidently has other meanings, as is certainly the case in Yucatec. However, here the sound is a postfix and the glyph is a prefix. I think this can be only a strange coincidence, and that the glyph in question does not stand for the sound *i*. Yet the sound *eh* (*ih* in highland Maya) added to the number indicates a count into the future (Noyes, 1935). Can Landa's *I* represent that sound? This is a possibility, hardly a probability. Noyes in the article cited brings together examples indicating that the sound *er* or *ir* was added to the number to denote a count into the past.

Among Landa's letters is the comb element, which is given the sound *ca*. This, however, is the first two letters of *cay* (or *cai*), the Yucatec word for fish. Tozzer (1921, p. 19) has claimed that the *ay* or *ai* sound in Yucatec is the only diphthong in that language. However, one might question that. In cognate languages an aspirate may occur between *a* and *i* (e.g. Yucatec *ain* 'alligator,' Tzeltal and Chol *ahin* 'alligator'), and the shift from Yucatec *a* to *i*, Mopan and Chol group *u*, is to be seen in the word for fish (Yucatec *cai*, Tzeltal *chai*, Tzolzil *choi*, Chol *chui*). Stoll (1884), from whom these comparisons are taken, accents the first vowel of *cai* and the cognated words. Finally the Motul dictionary gives examples of the indiscriminate use in writing the same word of a single or double *a* before *y* (e.g. *ah uay xibalba* 'sorcerer who speaks with the demon,' *ah uay chac* 'sorcerer who causes rain by the art of the devil,' *ah uaay ch'amac* 'sorcerer who takes the form of a gray fox'). Were *ay* a true diphthong, its first vowel could hardly be doubled. Accordingly there seems little doubt that *ca* can be the first syllable of the word *cai* 'fish,' and in a way the use of the comb here as the sound *ca* is confirmatory evidence that

‘comb’ (probably a conventionalized dorsal fin) was a symbol for fish. Long (1935, p. 27) has disposed of the old idea that *ca* was a form of rebus writing for *kal* “twenty.” Presumably *ca* could represent fish in general and *xoc* in particular.

CONCORDANCE BETWEEN RECORDS OF DATES ON STELAE AND
IN THE BOOKS OF CHILAM BALAM

If the Maya chronicles were old chants or recitations reduced to writing (and much garbled in the process), and if those chants or recitations were also recorded in hieroglyphic form—a supposition warranted by the information that the Maya had hieroglyphic histories—there should be some correspondences between glyphs and chronicles. Unfortunately, the methods of recording dates varied between the Initial Series period of the southern area and the system used in the chronicles, and in parts of Yucatan at much earlier times. The former referred to the katuns by their numerical sequence in the cycle; the latter by the Ahau days in which they ended. However, a few comparisons may be made.

INITIAL SERIES INTRODUCTORY GLYPH

Elements: comb or fish	tun sign	patron god	prefix
Maya: (u) <i>xocan</i> (or <i>xocol</i>)	<i>tunob</i>	God X u <i>uich</i>	?
English: the count of	the tuns	God X the face	?

Chilam Balam of Chumayel Chronicle (Roys, 1933a, p. 74)

<i>U kahlay</i>	<i>u xocan</i>	<i>katunob</i>
The record of	the count of	the katuns

Typical Passage in Chumayel Series of Katun Prophecies

<i>Lahcabil Ahau katun . . .</i>	<i>yaxal chuen</i>	<i>u uich</i>
12 Ahau katun . . .	(the god) <i>Yaxal Chuen</i>	its face

It should be noted that the face in the Introductory Glyph is that of the patron of the month, not of the katun.

Period Ending, Group of Glyphs (Stela 4, Copan)

Elements:	4	Ahau	13	Yax	fish-head prefix
Maya:	Can	Ahau	<i>oxlahunte</i>	Yax	<i>xocan</i>
English:	4	Ahau	13	Yax	counted
Elements:	<i>hand, tassel, shell</i>		15	<i>katuns</i>	
Maya:	<i>u dz'oc</i>		<i>holhunte</i>	<i>katunob</i>	
English:	the completion of		15	katuns	

Chilam Balam of Mani Chronicle

<i>dz'ococ</i>	<i>u xocol</i>	<i>oxlahun</i>	<i>Ahau</i>
<i>completed</i>	<i>the count of</i>	<i>(katun) 13</i>	<i>Ahau</i>

Chronicle of Chicxulub

<i>Lai</i>	<i>cu xocol</i>	<i>yabil</i>
<i>Here</i>	<i>the count</i>	<i>of the years</i>

This passage (Brinton, 1882, p. 222) is suggestive of the Secondary Series Introductory Glyph.

From the above it is clear that the suggested translations of the hieroglyphs are closely paralleled by passages in the books of Chilam Balam when allowance is made for the different system of enumerating tuns, and to some extent these resemblances strengthen the interpretations proposed.

ADDITIONAL EXAMPLES OF ANTERIOR DATE INDICATORS

Posterior date indicators far outnumber anterior date indicators, because most distance numbers are counted forward. For instance, there are four distance numbers on Stela 3, Piedras Negras, and four on the west side of Stela E, Quirigua. All eight lead forward, and all are followed by the posterior date indicator. Two posterior date indicators on Altar Q, Copan, are rather unusual in that Landa's i element becomes an infix set in the head of the main element.

In order to amplify the material recorded in Thompson, the following examples of anterior date indicators may be noted: Copan, Stela A, glyph block E2b; Copan, Altar U, glyph block 26 (supplying confirmation of the reading offered in Thompson, 1935a); Quirigua, Stela C, west side, glyph block A9; Quirigua, Stela K, glyph block B6a; Quirigua, Zoomorph G, glyph block A'3 u.h.; Piedras Negras, Stela 12, glyph blocks A16a and D7b; Piedras Negras, Lintel 2, glyph block X3; Aguas Calientes, Stela 1, glyph block D9; and Los Higos, Stela 1, glyph block D13.

In several cases the identification of the indicator confirms readings offered by Morley as doubtful. An exception is supplied by the second distance number on Stela 2, Ixkun. As this distance number, almost surely 1.4.10, is followed by the anterior date indicator, and that in turn by 12 Ahau, the missing date must be restored as:

(9.17.11.4.10	7 Oc 8 Uo)
1.4.10	
(9.17.)10.0.0	12 Ahau (8 Pax)

SNAKE OR EEL VARIANT OF THE ANTERIOR DATE INDICATOR

The use of a snake or an eel as a substitute for the more usual anterior date indicator was noted in my previous paper. As the cases in which this variant is used are few and as all occur at Palenque, it is possible to record all of them in the following table.

TABLE 19.1

<i>Monument</i>	<i>First Date</i>	<i>Distance number</i>	<i>Second Date</i>	<i>Eel or Snake</i>	<i>Glyph Block</i>
Stela 1	9.12.6.5.8 3 Lamat (6 Zac)	1.10.1	9.12.4.13.7 1 Manik 10 Pop	1 Manik	A10
Panel of 96 Glyphs	9.17.13.0.7 7 Manik 0 Pax	7	9.17.13.0.0	13 Ahau	K2
T. of Inscr. East panel	9.8.17.9.0 13 Ahau 18 Mac	6.14	9.8.17.15.14 4 Ix 7 Uo	13 Ahau	M7
T. of Inscr. West panel	9.9.2.4.8 5 Lamat 1 Mol	2.4.8	9.9.0.0.0 3 Ahau 3 Zotz	3 Ahau	E8
T. of Inscr. West panel	9.11.0.0.0 12 Ahau 8 Ceh	6.16.17	9.11.6.16.17 13 Caban 10 Chen	12 Ahau	L8
T. of Inscr. West panel	9.12.0.0.0 10 Ahau 8 Ceh	3.6.6	9.12.3.6.6 7 Cimi 18 Ceh	10 Ahau	P5
T. of Inscr. West panel	9.9.13.0.0 3 Ahau 3 Uayeb	17	9.9.13.0.17 7 Caban 15 Pop	3 Ahau	R3
T. of Inscr. West panel	1.0.0.0.0.8 5 Lamat 1 Mol	8	1.0.0.0.0.0 10 Ahau 13 Yaxkin	Tun sign	H8
Del Rio Stones	(9.11.1.12.6) 7 Cimi 4 Xul	1.(12.6)	9.11.0.0.0 12 Ahau 8 Ceh	12 Ahau	A1

Only in the last case is the record uncertain. This is because the starting point of the distance number is on an unrecovered stone. However, yet another stone, belonging to this group of stones of approximately the same size and with a similar glyphic arrangement, which is now in the National Museum of Archaeology in Madrid (Lothrop 1929), carries the date 7 Cimi 4 Xul. One of the possible positions in the Long Count for this floating Calendar Round date is 9.11.1.12.6 which is 1 tun, 12 uinals, and 6 kins after the date recorded on the six-block tablet in Mexico City. The opening glyph of the latter

tablet is 1 tun, clearly the end of a distance number. If our assumption is correct, the remainder of the distance number (12 uinals 6 kins) should be on the missing tablet.

With the exception of this dubious reconstruction, every other date where this eel affix occurs is the earlier in time of a pair of dates connected by a distance number.

GENERAL REMARKS

Further investigation fails to confirm the guess that the flame element might indicate a forward count when attached to a day sign. In view of what has been written above, it might represent *ti*, which has the meanings of 'to, from, or on.' For example, the inscription on Temple 22, Copan, opens with a day 5 Lamat to which the flame affix is attached. There follow several glyphs of unknown meaning. "On 5 Lamat such and such a ceremony was performed or God X's influence was dominant" appears a reasonable translation. Where the flame element follows a Secondary Series without a directional counting glyph, the meaning would be 'to.' Parallels to such readings are to be found on page 66 of the Chronicle of Oxkutzcab where occur passages such as "9 Ahau the tun, on 2 Xul" or "9 Kan the year bearer, on 1 Pop."

As a warning against too ready acceptance of the thesis advanced in this paper, it might be noted that among Yucatec names of fish occur *xul* 'skate.' *Xul* is the usual Yucatec word for 'end.' I have given full consideration to the possibilities of this alternative, but have reached the conclusion that this is merely a confusing coincidence.

This paper is directed primarily to the student of Maya epigraphy. Nonspecialists in the Maya area interested in the development of Maya hieroglyphic writing are referred to the most recent discussions of the subject: Long, 1935, and Whorf, 1935. Whorf, 1933, contains a fairly complete bibliography and a good historical summary of the subject by A. M. Tozzer, but in my opinion much of Whorf's text must be read with great reserve.

A summary of the tentative conclusions reached in this paper is omitted in view of the outline of arguments given . . . [above].

The fact that the paper is published in the present series is sufficient indication that the case is not considered to have been completely proved.

“New Data on the Maya Written Language”

Yuri Valentinovich Knorosov

*Benjamin Whorf's failure to decipher the phonetic portion of Maya script reduced interest in this topic for close to twenty years. Not surprisingly—considering the assumptions then current among Mayanists—the major breakthrough in phoneticism came from a student with little connection to the mainstream of Maya research. This individual was Yuri Valentinovich Knorosov, born in 1922 to ethnically Russian parents in Kharkov, Ukraine. As explained by Michael Coe in *Breaking the Maya Code* (Coe 1992: 146), World War II interrupted Knorosov's early studies and involved him in some of the bloodiest battles of that conflict. Afterward, Knorosov resumed his research at Moscow University, concentrating on Egyptology and the languages and writing systems of Asia. With encouragement from his professor, Sergei Tokarev, Knorosov soon focused on Maya writing, submitting as his doctoral thesis a commentary on Landa's *Relación*. After completing his studies, Knorosov took a research position at the Institute of Ethnology in Leningrad (M. Coe 1992: 146–47).*

Knorosov's interpretation of Maya writing was already well developed by the time he published his first monograph on the subject. Despite questionable interpretations, he advanced decipherment in several notable ways: (1) like Rosny, who drew on comparative data from other scripts, Knorosov recognized that Maya glyphs contained several kinds of graphemes; (2) he identified Landa's abecedario as a syllabary, allowing him to apply it consistently to a wide variety of hieroglyphs, mainly from the codices. Unlike the ideographic interpretations then championed by J. E. S. Thompson, Knorosov's approach demonstrated a more sophisticated knowledge of orthographic possibilities.

Thompson's scholarly prestige and the vehemence of his condemnation prevented the ready acceptance of Knorosov's ideas outside the Soviet Union. The skepticism of other scholars further weakened his reputation (Barthel 1958). Yet phoneticism as understood by Knorosov slowly gained acceptance, especially among linguistically trained students and a few other stalwarts, such as David Kelley. Today most epigraphers view Knorosov's readings with a strong measure of reserve: many of his decipherments have proved unacceptable, and his later work in particular lacks convincing support. Nonetheless, Knorosov's general vision of glyphs continues to dominate Maya epigraphy at the end of the twentieth century and to provide the foundation for linguistic decipherment.

Written in 1956 by Yuri Valentinovich Knorosov (1922–99). Reprinted from Knorosov 1956.

Reading of Maya hieroglyphic texts requires an extensive preliminary work, that is a thorough study of the vocabulary and grammar of the ancient language. There are all reasons to believe that the texts were written in the language used at the time when hieroglyphic writing was invented (first centuries B.C.). This ancient language became literary and sacred. Priests wrote in it before the Spanish conquest. The spoken language changed very much in all respects since that time.

Before studying the language of a hieroglyphic text it is, of course, necessary to establish exactly the meaning of the individual glyphs. This work has not yet been completed. Besides that there is much doubt whether a number of glyphs were established correctly. Therefore, it is expedient to consider in what ways this work might be conducted.

First of all, it should be noted that we have a considerable number of initial hieroglyphs, the meaning of which was interpreted in the sources of the 16th century or determined indirectly with the aid of these sources. To the initial hieroglyphs should be referred hieroglyphs which mean days, months, periods of time, five colors, four cardinal points, and "Landa's alphabet" with three examples of spelling. All this material, which was well known already in the 19th century, requires a thorough critical study. Among the initial hieroglyphs there are both individual glyphs (hieroglyphs of days, five colors, "Landa's alphabet") and combinations of several glyphs (hieroglyphs of months, periods of time, four cardinal points, and three examples of spelling). Altogether among the initial hieroglyphs there are about 80 individual symbols, some of them being met in two and more combinations. In many cases interpretations of the same initial glyphs in the sources contradict each other. For example, the glyph of the 7th day Manik appears in the hieroglyph which means West (*chikin*), the symbol of red color (*chac*) appears in the hieroglyphs which mean months Zip and Ceh, etc. It is clear that either in some cases the interpretation is not correct, or one and the same glyph has different meanings. Many names of the days, months, cardinal points, periods of time written hieroglyphically differed considerably from the names used in the spoken language of the 16th century. Therefore, these names of the 16th century can be used for determining glyphs only after careful verification. More reliable interpretations are given in "Landa's alphabet."

Notwithstanding all these reservations, the reading of some initial glyphs does not call any doubts. For example, the glyph kin is read in the same way in the hieroglyphs which mean a month Yaxkin, West (*chikin*) and East (*likin*). The glyph yax is encountered in the hieroglyphs which mean months Yax and Yaxkin, glyph ca from "Landa's alphabet" is met with in the hieroglyphs meaning months Zec and Mac, glyph k in the hieroglyph meaning month Kayab and in the third Landa's example (*kati*), the glyph ma from the third Landa's example encountered in the hieroglyph meaning month Mac and South (*nohol*); in the last case a supposition is possible that the sounds m and n interchange.

Using initial glyphs, an attempt can be made of reading words of the hieroglyphic text. In this case the reading of many initial glyphs is confirmed. If an initial glyph has the same reading in several words, this gives a reason to consider its reading trustworthy. For example, to such a kind of initial glyphs with confirmed reading are referred many glyphs from "Landa's alphabet" (*e*, *ca*, *k*, *l*, *cu*, *ku*, *u*, *z*, *ma*, *ti*, and others). In turn, the reading of words with initial glyph makes it possible to determine a number of new

glyphs. Such are, for instance, the glyphs *ch(e)*, *p(a)*, *tz(u)*, *nal*, *ah*, etc., whose correct reading is confirmed by a number of examples.

A study of combinations in which a given glyph is met with is certainly the most reliable method of determining its meaning. However, many glyphs are very rare and found only in one combination (word); therefore one has also to resort to various auxiliary methods of their determination. First and foremost, a wide use can be made of reading the affixes. For example, if it is known that a given word the radical of which is written in unknown glyphs has a suffix of transitive verbs (*ah*) or a suffix of nouns (*nal*), this already considerably diminishes the circle where a suitable meaning of the unknown glyphs has to be searched. Determination of unknown glyphs is also facilitated in some cases by that duplication and by the presence of numerals or known adjectives before the words. Besides that, by comparing symbols with the pictures and with each other, it is possible to establish which objects they represent, which is especially important for determining ideograms. Finally, a use can be made, especially for the purpose of control, of a conformity between the text and the pictures in the manuscripts.

A thorough consideration even of initial hieroglyphs only shows that the Maya writing (like all hieroglyphic systems of writing) has three categories of glyphs: ideographic, phonetic and determinative (key).

Determination of ideograms is most difficult, for a precise establishment of their reading can be done only indirectly. Even in those cases, when the sense of an ideogram is clear, it is difficult to find out which word it means. For example a comparison with pictures makes it easy to determine the ideograms of jaguar, turkey, and other animals. But in Maya, jaguar is called either *balam* or *bolay* and turkey either *kutz* or *ulum*. To which of these synonyms the ideogram corresponds, remains unknown and, besides that, it is impossible to establish whether the ancient pronunciation differed from that of later times. To determine accurately the reading of an ideogram is possible only if it is also used as a phonetic glyph, as, for example, the ideogram of tree *te*, or the ideogram of the sun, *kin*. Use can also be made of the cases, when instead of an ideogram a phonetic writing is applied for example, the words *cutz* (turkey), *moo* (parrot), *muau* (owl) are found both in the ideographic and phonetic records. Some symbols have two different readings, depending on whether they are used as phonetic glyphs or as ideograms. For example, the ideogram *yax* (green) as a phonetic glyph is read *hal*. Such cases were usually marked by Maya scribes by means of special signs, which in general were used in order to distinguish phonetic glyphs from ideograms.

Determinative glyphs are relatively rare, and their definition is not very difficult when they are encountered in many words associated thematically. Such are, for example, the determinative glyphs which accompany the names of months, sacrifices, gods. In a number of cases, however, it is not easy to distinguish a determinative glyph from that of a phonetic or ideographic one.

If some ideograms, probably, convey two-syllabled words (*bolay muau*), the phonetic glyphs always represent only one syllable. Phonetic composition of these syllables is just the same as that of the radicals of the Maya language (except Saitillo), namely, they may consist of one vowel (type A), vowel and consonant (type AB), consonant and vowel (type BA), and two consonants with a vowel between them (type BAB). Glyphs for the

open syllables are also used for expression of separate consonants at the end of the word; for that reason it is more correct to denominate them as alphabetic-syllable of the type B(A). Wide use of these glyphs is a characteristic feature of Maya writing. Phonetic composition of words was expressed rather accurately in the hieroglyphic writing. There were phonetic glyphs for five basic vowels, but vowels with the Saltillo were not represented. Two versions of stop-consonant sounds and affricates—simple and with the Saltillo—were communicated by different glyphs.

Together with accurate determination of individual glyphs it is necessary to study thoroughly the spelling, that is, hieroglyphic orthography.

1  Can Moo Nał. 2406.	20  Can Bolay. M40c.
2  (N)lahun Caan Nał. 210a.	21  le. M91a.
3  Can Chex Nał. 2216	22  le M42c.
4  mut. M94c	23  cab. M104c.
5  chac te. 230c	24  tun (tum). 272c.
6  chekinil. 229c	25  Chac Chel. 270.
7  kam. 22J	26  tzul caan. 2406
8  par. M103b.	27  Chac Chel. 2396
9  Chel. 267a.	28  ka(m)aan. 212c.
10  tzul. 27a.	29  che(kin). M6a.
11  Can Tzuc. Yula. IBS	30  u ah pa. 261
12  chekinil. 231c	31  (t)waan (xwaan). 249
13  bolon zuucab. M105b	32  chaan (caan). 2406
14  checah (chacab). 233c.	33  mahal (nohol). 226c.
15  chucab. M41b	34  keh (kax). 269
16  kuch. 213c.	35  che (ceh). M61a.
17  mut. 217b.	36  ah cuch. 219c.
18  nite. 212c.	37  ah cimil. 217c.

Figure 20.1. Examples of the writing of words

The order of glyphs in the words is the same in both the Maya manuscripts and inscriptions. The glyphs go from left to right and downwards from the top (except pages 21–24 of the Paris manuscript, where lines and glyphs in the words go from right to left). But in a number of cases the breaking of the usual order of glyphs is encountered for calligraphic considerations. A typical case of inversion is the spelling of incompletely figured glyphs above oval and oval-figured ones. This peculiarity of the Maya calligraphy should be borne in mind in order to avoid possible mistakes in reading. Thus, for example, the suffix *nal* which should be at the end, is written above oval and figured-oval glyphs in the words *Can Moo Nal*, *Oxlahun Caan Nal*, *Can Chek Nal* (Figures 20.1, 1, 2, 3) incompletely figured glyph *t(I)* is written above oval symbol *m(u)* in the *mut* (Figure 20.1, 4), etc. However, there are cases when in violation of the usual an oval glyph is written above an incompletely figured one, for example, in the word *chac-te* (Figure 20.1, 5). Another sort of inversion is insertion of glyphs into one another (for example, in the word *chekinil*, Figure 20.1, 6). In this case the inserted glyph is read last.

Phonetic spelling of words is encountered rather frequently in Maya writing and is of the greatest interest for studying the vocabulary and grammar of the ancient language. In this case it is very important to bear in mind peculiarities of use of alphabetic-syllable glyphs of B(A) type which are common in the Maya writing. An alphabetic-syllable glyph may represent either an open syllable at the beginning or in the middle of the word, or one consonant at the end of the word. Since there are several alphabetic-syllable glyphs for the same consonant (but with different vowels), for example, *k(a)*, *k(u)*, *k(e)*, *l(e)*, *l(u)*, etc., one would think it makes no difference which of these glyphs has to be used in order to express one consonant at the end of the word. But Maya scribes rather strictly stuck to the following orthographical rule: for expressing a consonant at the end of a word use should be made of such an alphabetic-syllable glyph, the supposed vowel of which is identical with the preceding vowel. This kind of spelling may be called synharmonical. In this way, for example, are written the words *kam*, *pak*, *Ch'el*, *tzul*, *tzuc* (Figures 20.1, 7, 8, 9, 10, 11) where for expressing final consonants alphabetic-syllable glyphs *m(a)*, *k(a)*, *l(e)*, *l(u)*, *c(u)* are used, respectively.

EXAMPLES OF THE WRITING OF WORDS

- | | |
|-------------------------------------|-----------------------------------|
| 1. <i>Can Moo Nal</i> . D40 b. | 20. <i>Can Bolay</i> . M40 b. |
| 2. <i>Oxlahun Caan Nal</i> . D10 a. | 21. <i>Le</i> . M91 a. |
| 3. <i>Can Chek Nal</i> . D21 b. | 22. <i>Te</i> . M42 b. |
| 4. <i>mut</i> . M.94 b. | 23. <i>cab</i> . M104 b. |
| 5. <i>chac te</i> . D30 b. | 24. <i>tun (tum)</i> . D 72 b. |
| 6. <i>chekinil</i> . D29 b. | 25. <i>Chac Ch'el</i> . D 70. |
| 7. <i>kam</i> . D2 d. | 26. <i>tzul caan</i> . D 40 b. |
| 8. <i>pak</i> . M103 b. | 27. <i>Chac Ch'e (1)</i> . D39 b. |

- | | |
|---------------------------|---------------------------|
| 9. Ch'el. D67 a. | 28. ka(m)aan. D12 b. |
| 10. tzul. D7 a. | 29. che (kin). M6 a. |
| 11. Can Tzuc. Yula 1. B5. | 30. u ah pa. D61. |
| 12. chekinil. D31 b. | 31. tzuaan (zuaan). D49. |
| 13. bolon zuucab. M105 b. | 32. chaan (caan). D40 b. |
| 14. checah. D33 b. | 33. mahal (nohol). D26 b. |
| 15. chucah. M41 b. | 34. keh (kex). D69. |
| 16. kuch. D13 b. | 35. che (ceh). M61 a. |
| 17. rout. D17 b. | 36. ah cūch. D19 b. |
| 18. nictē. D12 b. | 37. ah cimil. D17 b. |
| 19. Chac Bolay. D8 a. | 38. Itzamna. D5 b |

In some cases the phonetic composition of a word does not permit to apply this rule, and sometimes it seems that an alphabetic-syllable glyph is coordinated not with the preceding, but with the following glyph. As examples of such spelling may serve the words *zuucab*, *checah*, *chucah* (Figures 20.1, 13, 14, 15), etc. Such a spelling, like a synharmonical one, may be called regular.

Alongside with the regular spelling, though much more seldom, irregular spelling is encountered. For example, the words *kuch* and *mut* (Figures 20.1, 16 and 17), have at the end glyphs *ch(e)* and *t(l)*, respectively. It is unclear what were the reasons which caused such a spelling. It is possible that alphabetic-syllable glyphs, did not exist for all the open syllables. On the other hand, there are reasons suppose that in some cases a final alphabetic-syllable glyph was read not like alphabetic, but like a syllable one. This, apparently, is testified by the third Landa's example, which gives reading *kati*, but not *kat*. Finally, irregular spelling might have been caused by purely calligraphic considerations. For example in the word *kuch* it is difficult to connect the glyph *ch(u)* with the preceding glyph.

Regular (especially synharmonical) spelling is absolutely dominant. It facilitates a study of phonetics of the ancient language and, certainly, should be used for determining and specifying the unknown and doubtful glyphs, especially those which are rare.

Purely ideographic spelling is relatively rare. As examples of such spelling may serve the words *nicte*, *Chac Bolay*, *Can Bolay* (Figures 20.1, 18, 19, 20), etc.

Phonetic complements may be used in phonetic or ideographic spelling. The alphabetic glyphs of type A, syllable glyphs of type AB and alphabetic-syllable glyphs of type B(A), which confirm reading of the preceding syllable are used as phonetic complements. For example, in the words *le*, *te* (Figures 20.1, 21, 22) to the alphabetic-syllable glyph *l(e)* and to the ideogram *te* is added an alphabetic, symbol *e*; in the words *cab*, *tun* (Figures 20.1, 23, 24), to the syllable glyphs of type BAB are added syllable glyphs of type AB (*ab*, *un*); in the word *caan* (Figure 20.1, 32) to the syllable glyph of type BAB is added an alphabetic-syllable glyph *n(a)*.

For writing compound words or stable phraseological units equivalent to a word, a mixed spelling is often used with application of ideograms and phonetic glyphs. In this way are written the words *chac-te*, Chac Ch'el, *tzul Caan*, *chekinil* (Figures 20.1, 5, 25, 26, 12), etc. In these cases the ideograms *chac* (red), *caan* (sky), *kin* (sun) are used together with phonetic glyphs.

In any spelling use may be made of determinative glyphs which indicate the meaning of the word, but are not read. For example, in the words *bolon zuucab* (Figure 20.1, 13) and Itzamna the determinative glyph accompanies the phonetic spelling, and in the name of the month Yax—the ideogram.

Thus, in Maya writing the following methods of spelling may be used: phonetic regular (including synharmonical) and irregular, ideographic and mixed. In addition to this, all these methods may use phonetic complements and determinative glyphs.

A mention should also be made of incomplete or defective spelling, in which some glyphs are omitted. In this way, for example, are written the words Chac Ch'e(l), *ka(m)aan*, *che(kin)* (Figures 20.1, 27, 28, 29).

Summing up, it is possible to state that at present there are quite sufficient initial data for studying the grammar and vocabulary of the ancient Maya language, though the preparatory work (determination of individual glyphs and study of spelling principles) has not yet been completed.

Phonetics of the ancient Maya literary language, undoubtedly, differed considerably from the spoken language used at the times of the Spanish conquest, which is known to us. As to the vowels a note should be made, first of all, of a widespread synharmonism in the new language. Synharmonism is manifested in different ways. Some two-syllable words of the ancient language, for example *lakin*, *chekin*, *checah*, *ch'omac*, in the new language are pronounced *likin*, *chikin*, *chacah*, *ch'amac*. In the intransitive verbs the vowel of the ancient suffix *hal* changes in conformity with the vowel of the radical, and the consonant *h* disappears, as a result of which there appear the verbs of the *hanal*, *cimil*, *ukul* type. In the verbs of passive voice the vowel of the ancient suffix *bal* is subjected to the same change and the consonant *b* disappears. This process of verb synharmonization was at its height at the times of the Spanish conquest, while in the ancient language it did not take place. In the new language the possessive pronoun prefix *u* before vowels is substituted for *y*, while in the ancient language there was not such a phenomenon (see, for example, the spelling of *u ah pa*, Figure 20.1, 30). A note can also be made of vowel gradation *e-I*, *a-o*, *a-u*.

Pronunciation of consonants has also changed considerably. In particular, a note can be made of interchanges of consonants: *tz-z*, *t-ch*, *ch-c*, *m-n*, *h-x*, of disappearance of a weak sound *h*, etc. For example, the words of the ancient language, *tzuaan*, *te*, *chaan*, *mahal*, *keh*, *che*, in the new language are pronounced *zuaan*, *che*, *caan*, *nohol*, *kex*, *ceh* (Figures 20.1, 31, 22, 32, 33, 34, 35).

A note should also be made of a number of serious changes in the grammar. In the new language a new group of personal nouns appears as a result of recomprehension of the prefixes *ah-* and *ix*, which in the ancient language did not give indications as to the sex. Survivals of the ancient use of these prefixes can be noted in the Motul dictionary, for example, *ah al* is "a woman giving birth," *ah icham* "a married woman" to which in

the hieroglyphic texts correspond *ah kuch-* "a woman bearing something" and *ah cimil* "dying woman" (Figures 20.1, 36, 37). Names of women, for example, Ix Ch'el in the hieroglyphic texts, have no prefix *ix*. It seems that in the hieroglyphic texts there is no suffix *-ob* of the plural of the nouns, which is usual in the new language. Especially great changes occurred the conjugation of the verbs. As was mentioned above, a synharmonization of many intransitive and passive verbs took place. This process also continued after the Spanish conquest. Later on there appeared analytical conjugation with the aid of tense particles in combination with pronoun affixes. In this connection the bases of the present and future tenses of transitive verbs changed. In the ancient language the suffix conjugation dominated. In addition to this, it should be noted that the future tense with suffix *-om*, which is encountered as an archaism in the texts of the colonial period, disappeared. This suffix seems to be an ancient form of the future tense from the auxiliary verb *hal* (past tense is *hi*, future tense *-hom*), which was used as a suffix of intransitive verbs and sometimes independently. However, a detailed consideration of changes that occurred in grammar is not the aim of this paper.

A study of the vocabulary of the language used in the hieroglyphic texts is very much hampered by the fact that for the time being the vocabulary of the language of the colonial period has been poorly studied. As is known, even the most important dictionaries of the Maya language, including those from San Francisco and Vienna, have not yet been published. However the vocabulary of all the dictionaries, the copies of which are possessed by some specialists, is not sufficient for translating the texts of the colonial period. In the books of Chilam Balam (most of which are also unpublished) unintelligible and doubtful words are encountered in such a great quantity that the translations of these texts made by different authors often have no resemblance to each other. Suffice it to compare the translations by Alfredo Barrera Vásquez, Ralph Roys and Maud Makemson in order to make sure that this is true. If there are so many unknown words in the books of Chilam Balam, which make it very difficult to give an exact translation, it is natural that in the ancient hieroglyphic texts the matter is still worse. They have some quantity of understandable words surrounded by unintelligible or, in the best case, doubtful lexical material, which have analogies neither in the dictionaries nor in the texts of the colonial period. This is, of course no wonder, for the language of the hieroglyphic texts is by a thousand and a half years more ancient than the Maya language of the 16th century, which is known (or, to be more exact, badly known) to us. Therefore, we cannot expect a rapid success in reading hieroglyphic texts. On the other hand, it is this very circumstance which makes the Maya language especially interesting for the philologists, because at present this is the only language on the American continent the development of which can be traced within a period of two thousand years, i.e. from the beginning of A.D. to our days.

In addition to the above, it should be noted that the vocabulary of the Maya hieroglyphic manuscripts has a specific ritual character. At the same time it differs sharply from the vocabulary of the most archaic ritual texts in the books of Chilam Balam. There are considerable differences among such an apparently stable lexical group as the names of the gods. In the hieroglyphic texts there are names of the most important gods of the Maya pantheon, as, for example Itzamna and Ix Ch'el . . . , but at the same time they have

no such names as Kinich Kak Moo and, instead, there appear completely unknown names, for example, Can Moo Nal, Oxlahun Caan Nal, Can Chek Nal (Figures 20.1, 1, 2, 3), etc. Great differences exist in the terminology connected with the calendar, which one would suppose to be stable. Many names of the days and months are completely different. Even the word “month” in the hieroglyphic texts is written not as *uinal*, but as *keh*. Great differences also exist in other lexical groups.

There are no reasons to suppose that the language of hieroglyphic inscriptions on stone differs considerably from the language of hieroglyphic manuscripts. The differences between them are thematical. It is natural that the vocabulary of a triumphant inscription on a gravestone should differ from that of a ritual almanac of a manuscript. But their language is, likely, the same. At any rate it is important to note that in the inscriptions there are encountered words and grammatical forms which are the same as in the manuscripts.

A question arises whether there are similar texts in the books of Chilam Balam and in the hieroglyphic manuscripts. It is possible to show such kinds of texts. Thus, for example, on pages 34–37 of the Madrid manuscript there is brief information on the years of the 52-year cycle which may be compared with the prophecies concerning the years of the twenty-years-period of 5 Ahau in the book of Chilam Balam of Tizimin and in the manuscript of Pérez. But in the prophecies about years rather extensive texts are given to each year, while the Madrid manuscript has only brief indications, literally in two words. The text on pages 65–72 of the Madrid manuscript may be compared with the text *U mutil chuenil kin zanzamal* in the book of Chilam Balam of Kava and in the manuscript of Pérez, though the contents of these texts are very different. In both cases the question is of different texts devoted to the same theme, rather than of similar or parallel texts.

In recent years Maya philology is rapidly developing but the hieroglyphic texts, as before, remain out of the attention of philologists. The purpose of this report is to show that the necessary premises for a philological study of the ancient texts of the Maya hieroglyphic written language are already available.

Part Three

Principles of Decipherment

A common question about Maya decipherment concerns its delayed progress—why did it take so long to achieve a substantive, credible knowledge of the nature and contents of Mayan script? After all, in comparison to many Old World systems relatively little time had elapsed since the glyphs fell into disuse. Moreover, from an early date it was clear that the script recorded one or more Mayan languages, most reasonably well documented in dictionaries and grammars, some dating back to the sixteenth century. The discovery of Landa's Relación brought to light an eyewitness account of the system at the time of its demise that included a bilingual key. This "ABC" was neither a Rosetta Stone nor a Behistun rock carving, but it did provide valuable clues. And then there were the Maya numeration and calendar systems, which proved relatively transparent because of their mathematical regularity. Epigraphers would seem, then, to have had many aids to decipherment: knowledge of the script's linguistic affiliation; accurate if incomplete and somewhat misleading descriptions by eyewitnesses; and partial knowledge of the chronological content of texts.

Some have sought idiosyncratic explanations for the lack of progress, as in the suggestion that J. Eric S. Thompson single-handedly held back the decipherment (M. Coe 1992: 123–66). In our view, this position may be overstated. Thompson expressed his ideas strongly, and his attitudes, along with his position as the preeminent Mayanist of his generation, doubtless impeded the wider acceptance of Yuri Knorosov's phonetic approach. Nonetheless, Thompson's actions and attitudes do not explain the absence of plausible alternative approaches. Proposals by Benjamin Whorf died grim deaths, but their weak argumentation and poor use of evidence debilitated them far more than Thompson's criticisms. Knorosov's ideas survived and persevered because of their intrinsic merit.

Rather than regarding Thompson as the primary cause of stagnation, we prefer to identify him as a representative of shortcomings ubiquitous in Maya scholarship at the time. Foremost among them was the lack of solid cross-cultural perspective, which in epigraphic terms translated into a lack of awareness about writing systems in general and the range of variability in other scripts. Before Knorosov, the only Maya epigrapher to possess such knowledge was Léon de Rosny, a fact clearly reflected in his impressive essays. The "splendid isolation" of Thompson's Maya may explain his view of their script as an utterly distinct system, with few parallels elsewhere in the world. This is mirrored in his ahistorical and noncomparative model of the "empty ceremonial center," which stressed the uniqueness of the Maya case (Becker 1979).

To a large extent, Thompson's perception of Maya writing extended and preserved the tendencies of nineteenth-century thought. Both his emphasis on calendrical interpretations and his distrust of Landa's text originated in the writings of his predecessors, of whom the most influential was Thompson's "Nestor," Eduard Seler. Important advances were made in understanding the calendrical and astronomical texts in the first decades of the twentieth century. Quite reasonably, such advances justified the investment of scholarly energy in extending such research. It is telling that Alfred Tozzer was one of the few scholars to champion other, more linguistically oriented points of view, perhaps because of his intimate familiarity with Yucatec Maya (see Tozzer 1941: 891ff.).

Maya writing does possess inherent qualities that complicate the process of decipherment. The signs are graphically complex, and artists had considerable freedom in their execution. All evidence points to an indulgence of scribal virtuosity, especially in the more common signs. There are, for example, well over ten allographs of glyphs with the value *u*; prevocalic allographs of *u* are far rarer, possibly so as to avoid ambiguities in glyphs that inherently require additional morphemic interpretation by readers. Equally complex are the graphological conventions of Mayan script, which comprises glyphs that can be infixed, superimposed, and conflated, depending on reading order (infixes tend to be read after the infixor) or considerations of spacing (conflations promote economy of space) and emphasis (unconflated, unsuperimposed signs confer emphasis). Allographs and alternative spellings abound in Mayan script, as do incomplete or variant spellings. Moreover, glyphic spellings do not always correspond to morphemic renderings of words, an important point made a decade ago by Victoria Bricker (1986b: 185).

Without question, graphic complexity posed a significant problem for early decipherers, who struggled to isolate the basic units of the system. To phrase this in modern jargon, epigraphers encountered profound difficulties in defining the graphemes in Mayan script and in determining possible equivalences. This problem is reflected in Hermann Beyer's "The Analysis of the Maya Hieroglyphs," which attempted to distinguish significant units within individual signs—a spider's web that trapped Benjamin Whorf. More successful was Beyer's analysis of the texts of Chichen Itza, where he recognized multiple patterns of sign substitution within similar clauses, without, however, understanding the implications of his findings. In this sense, Thompson inherited Beyer's methodological legacy, although studies of substitutions continued erratically and unsystematically.

Paul Schellhas' paper conveys a certain despair about decipherment. By the mid-twentieth century, progress seemed limited, a situation not remedied until the appearance of Thompson's compendium (1950). Further breakthroughs came with the publication of Yuri Knorosov's findings (1952, 1956), which revolutionized discussions of graphology by demonstrating a syllabic element in Maya script. Several years later, Heinrich Berlin (1958) and Tatiana Proskouriakoff (1960) proposed their historical interpretation of the glyphs, stressing the presence not only of personal names, but of the events (expressed as verbs) that affected such people. Knorosov's ideas generated rapid response, and a long polemic ensued, with Thompson and Thomas Barthel figuring as Knorosov's main opponents. By contrast, Proskouriakoff's and Berlin's proposals received immediate and broad acceptance, but with surprisingly little criticism or independent testing and expansion of their hypotheses. Several years passed before both approaches were to be understood and applied comprehensively.

Floyd Lounsbury's article marks the maturity of recent Maya glyphic studies, with its application of Beyer's systematic analysis of parallel passages to the identification of allographic signs,

its use of Knorosov's phonetic approach to attain a phonetic understanding of the system, and its interpretation of the contents of the script in terms of historical narrative. The final paper in this part, by David Stuart, embodies current approaches to phonetic decipherment. It shows that readings form part of a series of interlocking contextualized decipherments and that the range of evidence must be as wide as possible. It does not rely, as Knorosov did, on one or two sources, but rather draws on many dozens of relevant texts, whether codical, ceramic, or monumental. These later, more successful efforts came about because of something only fitfully present in earlier efforts: an attempt to understand both graphology—the typology, composition, and differentiation of signs—and the underlying transliteration of Mayan script, how glyphs render sounds and words that reflect language. In contrast, earlier efforts emphasized studies of isolated glyphs at the expense of complete texts, and vague, associative interpretations to the detriment of linkages with language. Decipherments have taken place because we can now identify and label different kinds of sign—by distinguishing carefully between syllables and logographs, true allographs and spurious ones—and because we no longer confuse glyphic spellings with morphemic analyses of these spellings. Current optimism is justifiable and appropriate, but the very nature of the script means that we cannot speak meaningfully of “breaking the Maya code” or “the decipherment,” but rather of many decipherments, in a process that, because of lacunae in the corpus and gaps in our knowledge of Classic Maya vocabulary, will probably never end.

“The Analysis of the Maya Hieroglyphs”

Hermann Beyer

A major step toward decipherment involves the analysis of regular patterns of repetition in parallel series of signs: the intent is to discern possible allographs through scrutiny of substitutions. The recognition of such patterns was first accomplished by Hermann Beyer in his study of the inscriptions of Chichen Itza. Surprisingly, the introductory paragraphs of that volume do not claim any special innovation, other than Beyer's statement that he did not endorse Sylvanus G. Morley's exclusive concern with calendrical matters, which tended to obviate any interest in the corpus of texts from Chichen Itza, a place relatively lean on glyphic dates. Somewhat later, J. E. S. Thompson applied some of Beyer's ideas in his own work, but it was not until the 1970s and 1980s that epigraphers began to realize the full potential of Beyer's approach to decipherment.

*Of German origin, Beyer studied in the Universities of Würzburg, Berlin, and Paris, but his knowledge of ancient Mesoamerican cultures was essentially self-taught. His first contributions to the field dated from 1908. Sometime thereafter, he migrated to Mexico, where he taught archaeology to some of the earliest generations of Mexican archaeologists. In 1919, he founded a journal, *El México Antiguo*, that for several decades published major contributions to the field. As noted by Alfonso Caso (1942), Beyer was its director, secretary, proofreader, and author of articles and bibliographic notes—someone not above addressing envelopes and mailing copies of the journal.*

Beyer's early works dealt mainly with central Mexican topics, but after 1925 he concentrated chiefly on Maya writing. Most of his contributions focused on chronological matters. In addition to unraveling many abstruse dates, he demonstrated the relationship between month signs and the variable elements in the Initial Series Introductory Glyph (Beyer 1931). In 1927, he obtained a position at the Middle American Research Institute, Tulane University, where he worked until 1941. He died the following year in a camp for interned aliens at Springtown, Oklahoma, where he was confined because of his German nationality.

In comparison to the monograph on Chichen Itza, the study excerpted here represents a completely different approach. Like Benjamin Lee Whorf, he searched for significance in the glyphs by analyzing their component elements. This method was misguided and seems to have been completely abandoned by the time he concentrated on Chichen Itza. Nevertheless, it shows clear evidence of Beyer's preoccupation with noncalendrical decipherment.

Written in 1930 by Hermann Beyer (1880–1942). Excerpted from Beyer 1930.

The interpretation of the Maya monuments and manuscripts is well advanced in so far as arithmetic and calendar are concerned, but it is still regrettably backward in regard to non-chronological glyphs, and, although we know the numerical value of about one-third of the glyphs, we cannot say why such and such a face stands for such and such a number, or why a certain conventional character signifies a unit of 20 days and another one that of 360 days. Where explanations have been ventured they generally were so unfortunate that they did not receive recognition. Even the few less fanciful conjectures that were accepted by several scholars as plausible theses cannot be called scientifically founded hypotheses.

This unsatisfactory state of the special science which deals with the Maya hieroglyphs is caused by a considerable number of drawbacks, the cumulation of which results in making this study extremely difficult at the moment. To specify only a few of these impediments I might mention that but a few specialists dedicate their entire time and energy to the elucidation of Maya script. Thus, on the whole, scientific production in that line is limited in comparison with Classic or Egyptian archaeology. The published photographs of the glyphs are almost all too small and indistinct to allow a scrutiny of all significant parts and the drawings are sometimes fairly good for general purposes but not sufficiently exact for the finer details. The Dresden Codex, the finest and most erudite manuscript of Maya origin, has been reproduced in a good facsimile edition, and yet many minute lines and dots are too blurred to be recognized with security.

But with all the defects of the material at our disposal and the scarcity of preliminary investigations, something can still be achieved. It is true there is no key to Maya writing, and it is not one single method that alone will solve all problems, but by a number of rules worked out from the existing data we can reach fairly definite conclusions as to the original meaning of a great many signs of the Maya Body of Hieroglyphs.

One of these methodological principles which will allow us to attack successfully our problem is analysis as explained and employed in the following paragraphs. Analysis by itself, is, of course, not sufficient to do all the work. The knowledge of some of the other principles is indispensable even for a summary investigation of a limited number of hieroglyphs. But analysis is surely one of the most important methods for comprehending the formation of written characters of the Maya system, and has proved most fruitful in results.

The usual and faulty method has been to consider a hieroglyph as the conventional representation of a single object or detail, then to look for a similarity between this supposed figurative entity and some Maya object depicted in codices or on monuments. In default of Maya similitudes any general possibility was adduced. By this treatment in most cases a casual and external similarity was taken for identity. Figure 21.1, 6, for instance, has been explained as a female breast, Figure 21.1, 22 as a drum, Figure 21.2, 62 as the head of a centipede, or skull in front view, Figure 21.1, 33 either as a path, matting or part of a straw roof, or finally as a wooden bridge, and Figure 21.1, 31 as gourd, tree, phallus, or feather decoration. What these, and other signs, really mean we shall soon find out.

Out of the hundreds of different hieroglyphs I have selected a number of representative and determinable specimens, whose modifications and combinations will be

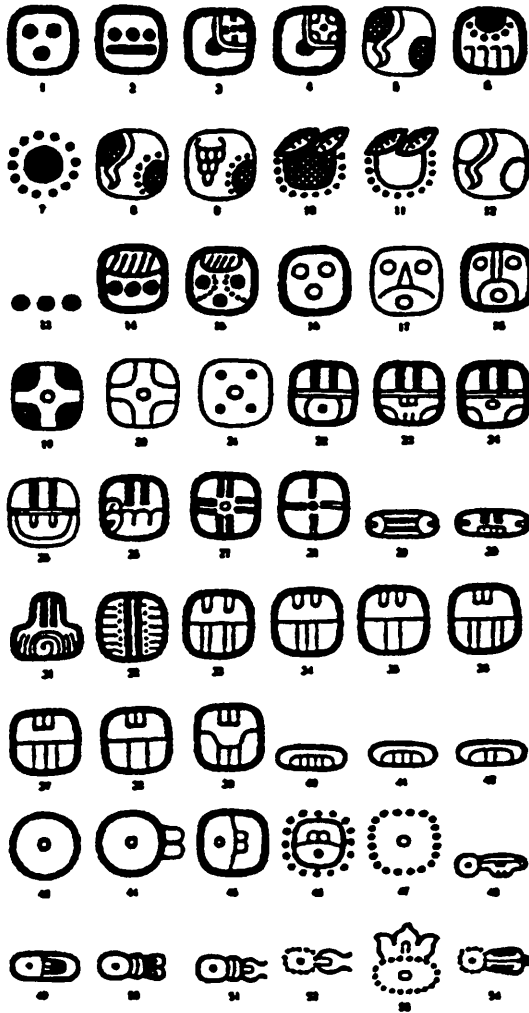


Figure 21.1. Maya hieroglyphs, nos. 1-54

briefly treated. Every fundamental glyph forms the head of a family which consists of all its variants, derivations and compounds. Sometimes these elementary hieroglyphs can be grouped with other, in some aspect similar ones, into great orders, sometimes subdivisions of the family group are practicable.

In order to show either the simple or composite character of the hieroglyphs here dealt with we will always give their formula in explanatory legends near the illustrations. At first these short symbolic expressions consisting of Arabic numbers and Latin and Greek letters will appear almost superfluous in their simplicity, but by and by they will grow more complicated and will then prove an excellent mode of representing the essential features of the different Maya characters and their variations.

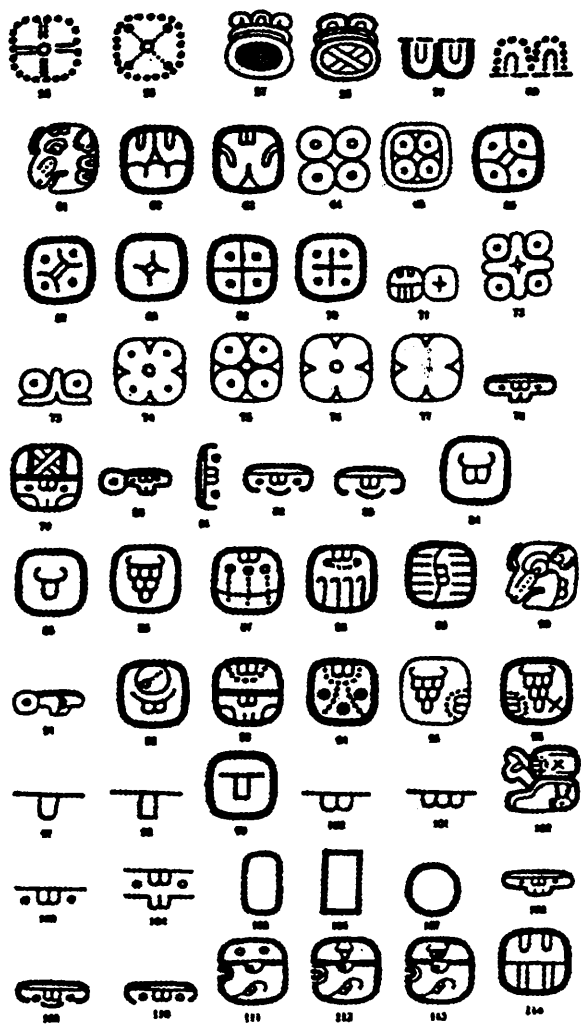


Figure 21.2. Maya hieroglyphs, nos. 55–114

The following list of abbreviations and signs employed in symbolizing the constitution of the Maya hieroglyphic units is self explanatory, so that no further comment is necessary.

I, II, III:	variants	her:	Horizontal
a b c:	simplification	inv:	Inverted
elab:	elaboration	sl:	Slanted
A B C:	symbolism	sep:	Separated
dup:	duplication	is:	Isolated

trip:	triplication	con:	Connected
quad:	quadruplication	vat:	not specified variation
mult:	multiplication	[affix]	
vert:	vertical	(Main Sign)	

FINAL REMARKS AND EXERCISES

Until now all the cited hieroglyphs have been given in a standardized form, which is a great convenience for the beginner, as the actual forms show much individual variation in shape, size, elaboration, etc., which makes a first attempt to deal with the material extremely difficult. But now the reader is considered sufficiently familiar with the characters reproduced in the paper, so that he may apply his learning to forms copied from manuscripts and monuments. Or, to view the matter from a higher plane: We have been dealing with the Platonic Ideas of the Maya hieroglyphs and must now come down to the reality of actually written signs in the codices and imperfectly conserved and published sculptured glyphs in the inscriptions.

Before we discuss the variations of a number of hieroglyphs reproduced in Figures 21.3, 222–21.4, 285, however, a few more general remarks must be made.

The system of careful analysis rendered available by detailed formulae as employed in the foregoing study is not only fruitful, but absolutely indispensable for an adequate understanding of the Maya hieroglyphs. It is not a mere classificatory method applied to the external form of the graphic signs; it leads us clear back to the origin and meaning of the root glyphs, as is plainly shown in several cases in which identical forms have a different life history or one and the same form has different meanings.

Necessary as it is, the method of minute analyzing does not provide us with formulas sufficiently simple to be dealt with in general work with Maya hieroglyphs. For this purpose we need short, precise and concrete expressions. These will be found now aside the compound glyphs given as examples. If the reader works out the intricate formulas for one or the other hieroglyphic combinations represented by Figure 21.3, 222–21.4, 285 he will get expressions that are much too cumbersome to be commonly used, while the condensed legends now employed are sufficiently clear to present the essential meaning of the hieroglyph. The complicated old formula was the only means of reaching the real and full significance of every detail of the fundamental glyphs, but once this aim is achieved there is no further necessity of recurring again and again to that unwieldy method. The formula has done its work; now it can be discarded. Now, but only now, the simpler and concrete legends can take its place.

Single hieroglyphs are very seldom used in Maya texts. Generally we have to deal with compound characters consisting of a principal glyph, recognizable by its full size, and one or more additional secondary signs of reduced size. The main glyph will be indicated in the legends by capitals, while affixes (including infixes) will have small letters.

Figure 21.3, 226–231 show us the hieroglyph Caban in written (Figure 21.3, 226–228), sculptured (Figure 21.3, 229 and 231) and modeled (Figure 21.3, 230) form. The

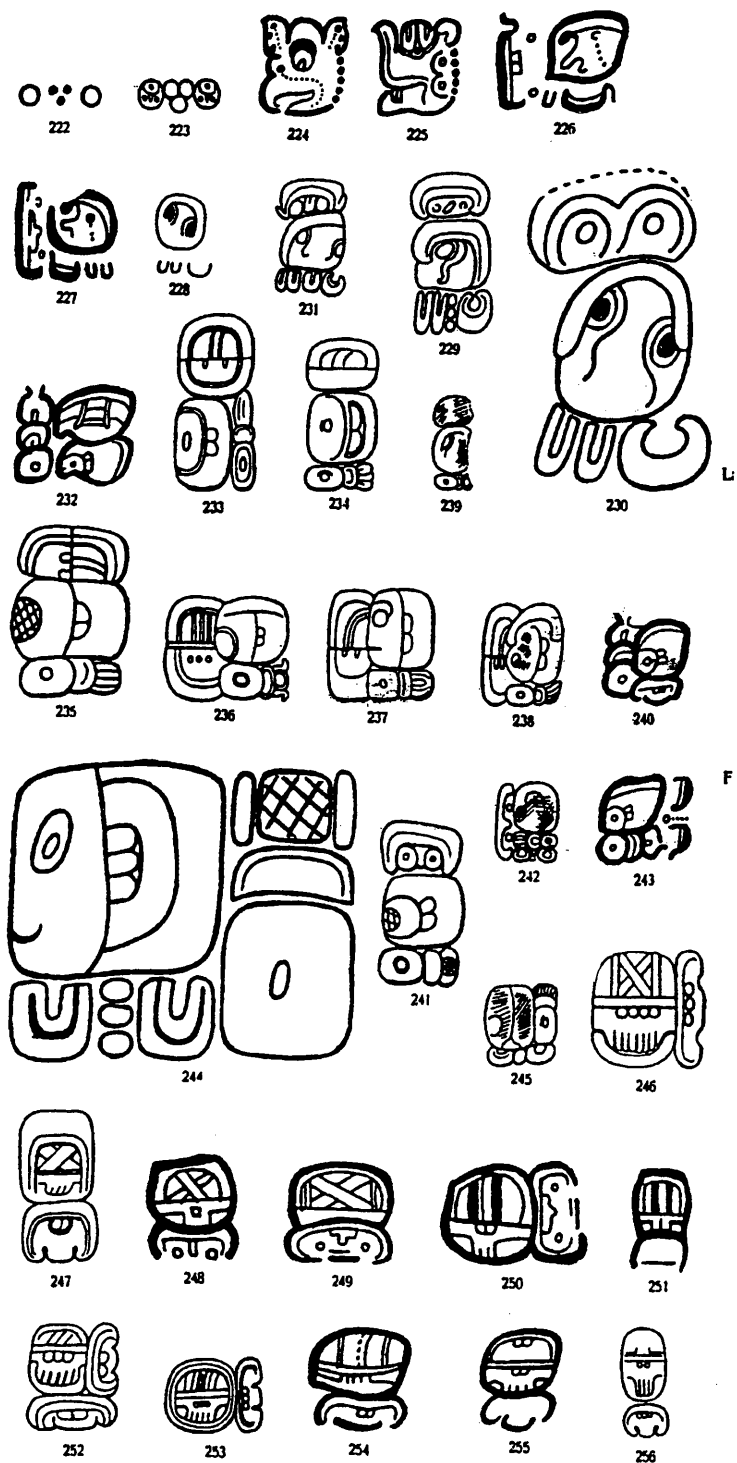


Figure 21.3. Maya hieroglyphs, nos. 222–56

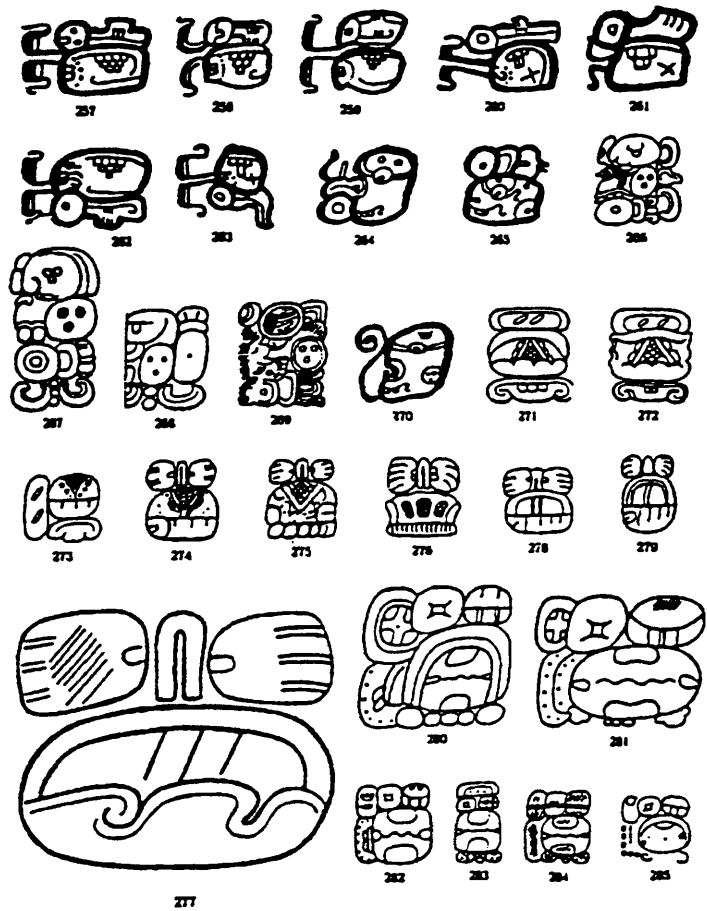


Figure 21.4. Maya hieroglyphs, nos. 257–85

character is here used not as a day sign but as a compound hieroglyph in Explanatory Series. Figure 21.3, 226–227 date from the last period, while the rest belong to the Old Empire. The simplest Caban form is Figure 21.3, 229: only the spot and the curl. This variant was always used at the ancient ruined city of Quirigua. In Figure 21.3, 228, a drawn or painted specimen from the old period,—that is, a rare occurrence—the curl has evidently become faint or has scaled off. Figure 21.3, 230–231 have instead of the usual numeral one, also the dot with curled line as infix.

The suffix is in all cases a combination of small and large flames, to which in Figure 21.3, 229 three dots are added.

The Teeth affix is in most cases clear, only concerning Figure 21.3, 229, copied from Maudslay’s drawing, I have some doubt about the correct rendering of the central detail. In Figures 21.3, 226 and 227 the affix is put before the main glyph, while in Figures 21.3, 229–231 it is above; in Figure 21.3, 228 it is lacking. The variant generally given by the

Perez Codex (Figure 21.3, 227) evidently stands nearer to the Old Empire forms of Figures 21.3, 230 and 231 than the Dresden Codex version (Figure 21.3, 226).

There is a compound glyph which on the monuments generally appears in Secondary Series between the "Distance Number" and the date and which, for that reason, might be named the Secondary Series Sign. In the Dresden Codex the sign occurs in astronomical computations dealing with lunar series. The Figures 21.3, 232–245 give examples of this sign which may be grouped in three sections which show slight differences. Figures 21.3, 232–239 from one group, Figures 21.3, 240–242 another and Figures 21.3, 243–245 a third. The essential parts for three compounds here treated are the Greenstone with Teeth and the Vulture Sign.

The first group is distinguished from the other two by possessing the composite glyph (25 + 22 dup sep) which represents the letter "i" in Bishop Landa's Maya alphabet. This sign, however, is given only the secondary role of an affix, although in Figure 21.3, 232 it is of larger size than the Greenstone glyph which is the true main sign. In Figure 21.3, 234 the two teeth in the lower compartment of the superfix are missing, surely only because they have become obliterated in the original. In this and in all other cases, excepting Figure 21.3, 232, variants of the numeral ten are employed in the upper part. Figure 21.3, 239 is the drawing given in Maudslay's great work of a hieroglyph that by the context must be the Secondary Series Sign. The original, indeed, shows the horizontal dividing line and traces of the other details in the superfix, while the main glyph has vestiges of the vertical line, etc. Thus the published drawing gives less than can be still detected on the weathered original and some details are wrongly interpreted as the elements in the main glyph that have been given the form of the Caban curl. In Figures 21.3, 232–235 and 239 Landa's "i" is superfix, in Figures 21.3, 236–238 prefix. The position of the superfix in Figure 21.3, 235 is anomalous in comparison with the other cases, but in accord with the position of the glyph in its prefix form.

In Figure 21.3, 232 the Greenstone Disk with Two Teeth is put into the left corner, while in the monumental forms it fills the frame more completely. Figure 21.3, 235 has the hole in the stone disk on the edge and indicated as dark. In Figure 21.3, 237 the circlet for the hole is shifted upwards and by the addition of a brow line used has eyes for a curious face that has an incision as a mouth.

The late form of the Vulture Sign (see Figure 21.3, 232) cannot have been derived from the usual Old Empire variant which we have in Figures 21.3, 235, 237 and 238, but must have come from variants like Figure 21.3, 236 where the outside part (corresponding to the upper part of the prefix in Figure 21.3, 232) is composed of three details.

The three examples given in Figures 21.3, 240–242 for the second variant of the Secondary Series Sign have as a new affix the teeth that indicate wood and indirectly fire. The sign is very simple in Figure 21.3, 240, while the separate teeth missing here are given in the other two cases. The other details are similar to those already treated. Figure 21.3, 242 has also a second suffix that connects it with the third version.

This third group (Figures 21.3, 243–245) has flames and dotted lines as distinguishing features. The written form (Figure 21.3, 243) has the Vulture Sign now in a horizontal position while in the other two cases (Figures 21.3, 232 and 240) it was erect. The punctuated line has one large dot, while the monumental form Figure 21.3, 244 consists of

three dots of equal size. The main glyph of Figure 21.3, 244 is, like Figure 21.3, 237, converted into a profile face. Three teeth and a curved line occupy the lateral compartment. The curved element is evidently only a meaningless esthetic detail employed to fill space. The Vulture Sign has clearly the central detail of its upper part filled with crossed lines, a peculiarity that can be detected also in Figure 21.3, 241. Figure 21.3, 245 reproduces the drawing in Maudslay's work, although it is not entirely correct. The original, here, too, is more in concordance with theory which presupposes in this place the Secondary Series Sign. There are, indeed, visible traces of at least one tooth in the main glyph and the lower line to the right is absent.

The main hieroglyph of Figures 21.3, 246–256 represents a sign that appears on Constellation Strips and Celestial Bands, and probably refers directly to the day sky and by extension to sky in general. In unison with the original meaning as Day Sky, Radiant Sky, Sunny Sky is the added affix which is again the common Teeth Sign to which I have given the short and significant name of "Fire Teeth."

In the upper half of the Sky hieroglyph were inscribed a number of different symbols of which the Crossed Bands are repeated in Figures 21.3, 246–249, the numeral ten in Figures 21.3, 250–252, probably the Steps in Figure 21.3, 253, the Dotted Line in Figure 21.3, 254 and the Teeth (an exceptional case without encircling dotted line) in Figure 21.3, 255, while Figure 21.3, 256 is too weathered to allow the recognition of the upper part.

The lower half has the upper teeth as disks in Figures 21.3, 246, 253 and 256, a form often found in Old Empire inscriptions. In the light of our former explanations these variants are no longer felt as arbitrary and vexing ideas of the ancient sculptors. Four upper teeth are present in Figure 21.3, 246, which is rather unusual, three or two of them being the common number. Below appear no less than eight dentations. In Figure 21.3, 247 no upper teeth at all are visible. They may have been rubbed off in this case, but in Figures 21.3, 249 and 251 they never existed. A very peculiar variant is represented by Figure 21.3, 248 where only one isolated tooth and the lateral details appear. In Figure 21.3, 251 two lower teeth are drawn. The lower half of Figure 21.3, 254 is in inverted position. In Figure 21.3, 246 no inner outline is indicated for the upper part and Figure 21.3, 256 probably had none at all for the whole glyph. On the contrary, Figure 21.3, 253 has a full double outline which, as a rule, only day signs possess. In Figure 21.3, 247 this broad outline embraces three quarters of the hieroglyph.

The secondary glyph Fire Teeth has variations in shape and inner details which are interesting but not important. In two cases, Figures 21.3, 251 and 255, only the outlines are given. These are, indeed, sufficient to determinate the sign, as they pertain only to this particular glyph. In Figure 21.3, 252 the Fire Teeth affix is repeated; probably the postfix was employed to narrow the space for the Sky Sign which otherwise would have become too broad.

The compound hieroglyph of Figures 21.4, 257–263 accompanies representations of the sun-god in the codices, probably designating him as the deity of the rainy season, as Cauac, "Thunderstorm," forms its principal part. All Cauac glyphs have the multiplied teeth and all but one (Figure 21.4, 261) also the two teeth with dotted line. In the Tro-Cortesian codex the two teeth are generally replaced by a short hook (Figures 21.4, 260

and 263). In Figure 21.4, 262 the dots are changed into short strokes, evidently picturing the hairy feathers that surround the beak of the Moan bird, as pointed out by Dr. Seller. The Moan bird, that is the horned owl, represents the dark sky of the rainy season. Crosses appear in Figures 21.4, 260, 261 and 263. The little hook in Figure 21.4, 258 is only a casual variant of the inner outline of the glyph as seen by comparison with Figures 21.4, 257, 259 and 262.

From the Cauac sign emanate two flames, referring to its fiery nature as the symbol of lightning. The flames are very simple in Figure 21.4, 261, while in Figure 21.4, 258 they have an almost complete double outline. The rest represents intermediate stages.

Above or below is seen the affix composed of the stone disk and the fire teeth. In Figures 21.4, 259–263 the Greenstone with the central perforation is conserved, while Figures 21.4, 257 and 258 show substitutes, Figure 21.4, 257 being the Ahau sign. Very valuable is the variant in Figure 21.4, 259 as it is treated similarly to the lower parts of the sky glyph, proving that both represent really the same thing. In the Dresden Codex the upper teeth are often reduced to mere strokes (Figures 21.4, 259 and 262). Figures 21.4, 261 and 263 are such extreme variations that only their connection with the compound character allows us to determine them as hieroglyph “Greenstone-Fire Teeth”.

The Figures 21.4, 264–270 reproduce the standardized Figures 21.2, 111–113 in the form they actually have in the manuscripts and on monuments. Very instructive is a comparison of Figure 21.4, 264 with Figure 21.4, 265, as they have all essential elements in common, although on first impression they seem so different. By the changed position of the affix the main sign is in the first case laterally compressed, while in the second case the compression is downward. These relations between affix and main glyph produce in Figure 21.4, 264 a high, narrow skull and in Figure 21.4, 265 a low, broad one. The Old Empire forms (Figures 21.4, 266–269) have as a characteristic mark a shield with three circlets in the lower right hand part, which is never wanting in the known specimens. In later times this symbol was dropped in most cases; Figure 21.4, 270, however, did retain it. Although here the Vulture Sign is replaced by a fire volute, the hieroglyph has the same function as Figures 21.4, 264 and 265. Figures 21.4, 268 and 269 are only partly conserved, but what remains is so significant that it suffices for identification. In Figures 21.4, 266, 268 and 270 the symbol in the upper part of the skull is the sign Ik, while two circlets are seen in Figures 21.4, 264 and 265 and three circlets in Figure 21.4, 267.

The Vulture Sign is not always clearly recognizable in the published drawings of the sculptured glyphs. Several times (for instance, Figures 21.4, 266 and 269) it could be taken for Zac. The same ambiguity happens in some cases of the Secondary Series Sign (Figures 21.3, 234 and 236). A careful examination of the originals, however, would probably allow a more exact rendering.

The Old Empire specimens Figures 21.4, 266–268 have a second affix, consisting of two flames with a few dots.

The design on the body of a mythical serpent is reproduced in variations by Figures 21.4, 271–276, which have in common the cross-hatching of a main central detail, that

is a large black triangle. Only in Figure 21.4, 276, this design has lost the usual form. In Figures 21.4, 277–279, vertical lines are conventionalized renderings of numeral ten, one of the most common Maya fire symbols.

The first affix in Figures 21.4, 271–273 represents the isolated oblique teeth, while the suffix is the ubiquitous Fire Teeth sign. Its form in Figure 21.4, 273 is interesting because it is so simplified that it almost reaches the degenerate variants in Figures 21.3, 251 and 255.

In Figures 21.4, 274–276, hieroglyphs of the Maya month Mac, the superfix represents two feather down balls with intermediate flame. The same affix also appears above Figures 21.4, 277–279. A “mouth” is added to the first belly scale in Figures 21.4, 274, 278 and 279. While in Figure 21.4, 277 only three scales are represented, in Figure 21.4, 276 many incised lines are visible.

The main glyph of Figures 21.4, 277–279 corresponds to the standardized forms Figures 21.4, 297–299; that is, the Banded Cross and the Steps were also used for the bars of numeral ten.

Very little variation is shown in the main glyph in the compound Figures 21.4, 280–285. All the five details that compose it are retained in Figures 21.4, 280–284. In Figure 21.4, 285 the middle wavy line and the lower oval are missing, but probably these have either faded or been rubbed off.

The prefixes are combinations of two signs. Only in Figure 21.4, 283 where this sign is placed over the compound glyph is it a simple figure. In Figures 21.4, 280 and 281 the upper part of the prefix is the sign for Yellow, while in Figures 21.4, 282 and 285 (and probably also in Figure 21.4, 284) the shell ornament is given. The lower parts in Figures 21.4, 280 and 282 represent two teeth with dotted outline, Figure 21.4, 281 two dotted lines, Figure 21.4, 285 one, while Figure 21.4, 284 has this part obliterated. The double superfix is always the Lamat center and *Been*. The suffix is in some cases clearly a double Ahau with intermediate dots. These are grouped in a horizontal line in Figures 21.4, 280 and 281, while Figures 21.4, 283 and 284 have them in a triangular group. Evidently space conditions cause the different grouping. This suffix cannot be of importance, as it is omitted in Figure 21.4, 282. On the original low relief of Figure 21.4, 280 are found faint traces of lines on the outer two circlets which surely once belonged to Ahau signs.

The purpose of this paper is to submit the more important results of my studies in brief form to the public interested in the matter. Detailed special memoirs, whose preparation will require considerable time on account of the great mass of hieroglyphic material to be published in them, will appear later on. In them all the proofs will be brought forth that can be produced in favor of the thesis here only sketched, and a full discussion of all intricate questions referring to the subject matter will be given. The importance of the problems seemed to the author to justify an early exposition of his views as given in this article.

Although only nine glyph families have been expounded, their members are so frequently met with in the texts that they cover a great part of the Body of Maya Hieroglyphs. The reader is invited to consult the facsimile editions of the three known Maya codices, the inscriptions published in the *Biologia Centrali-Americana* (A. P. Maudslay,

Archaeology) and the Memoirs of the Peabody Museum of Harvard University. He will now be able to understand the makeup of a good many of the strange sign-compounds, recognize many variations of the hieroglyphs mentioned in this paper and do some independent analytical work.

Studies on the Inscriptions of Chichen Itza

Hermann Beyer

This section presents an excerpt from a methodological breakthrough: Hermann Beyer's structural analysis of inscriptions at Chichen Itza. Beyer did not make significant progress in interpreting signs, but he did recognize that glyphs at Chichen fell into distinct clusters, with many repeated elements. In cryptographic terms, Beyer was focusing on what might be described as "substitution ciphers," bounded sequences of signs containing (or having the potential to contain) substitutable elements. An added control was his focus on a single site, with a sensitivity to differences in the age of certain texts. Yet Beyer did not develop his findings. We now know that equivalent signs may, depending on context, vary or substitute freely, while semantically or phonically distinct signs vary in restricted ways that reflect their underlying differences. Heinrich Berlin, who learned many lessons from Beyer's example, grasped this elusive point in his study of Emblem Glyphs. The "main signs" of Emblem Glyphs vary, but in a restricted fashion, correlating with individual sites. Regrettably, epigraphers have yet to construct a full, satisfactory approach to substitutables. There remains a tendency to confuse true substitution ciphers with spurious mixed ones that blur classes of cipher.

There are other problems with Beyer's study. He did not have a clear idea of the structure of the script, particularly its logographic and phonetic components. Although Beyer detected clusters of signs and their variant forms, he did not have the appropriate concepts to discover what those patterns meant. It was not until his structural approach was combined with Knorosov's phonetic discoveries, Proskouriakoff's historicism, and Lounsbury's linguistic emphasis (along with better access to the glyphic corpus) that epigraphers entered the current period of synthesis. But these quibbles do not diminish Beyer's achievement. José Miguel García Campillo (1995), Nikolai Grube (1994b), and Ruth Krochock (1991) have built on his exemplary study by bringing our knowledge of Chichen up to current standards. Beyer's comments on stylistic changes in hieroglyphs find an echo in a superb doctoral thesis by Alfonso Lacadena at the Universidad Complutense de Madrid (1995).

[pp. 34-35]

The work began with making reduced drawings of the hieroglyphs of an inscription from a good photograph, or using Maudslay's lithographic reproductions for those texts which he published in the magnificent *Biologia Centrali-Americana*. The first drawings were corrected by careful and repeated comparisons with the originals under different light conditions during two visits to Chichen Itza, in 1928 and 1932. The inked paper rubbings which Mr. J. H. Denison, Jr., had made, kindly put at my disposal by Dr. Morley, were also very useful for this project. In these paper rubbings, fine lines, which easily are overlooked in the originals, came out clearly.

These direct measures, indispensable as they are, still leave much uncertainty in cases of partly destroyed hieroglyphs and hieroglyphic elements. It was with the help of an indirect method that I succeeded in overcoming many of these difficulties. A great many hieroglyphs form parts of groups of two or more units; in fact, the great bulk of hieroglyphic characters is employed in such aggregations. While the traces of an indistinct sign may not be sufficient to allow its determination, such a mutilated glyph often can be safely recognized if the neighboring signs are sufficiently preserved to be identified. Sometimes the mere outline of a glyph, or even a small but very characteristic detail, suffices for its recognition. Even totally destroyed hieroglyphs can be filled in when they are determined unequivocally by their position in a series. The application of this method presupposes, of course, a thorough knowledge of Maya hieroglyphics and special familiarity with the use of specific forms under certain conditions.

[p. 37]

GLYPH PAIRS AND GLYPH SERIES IN THE CHICHEN ITZA INSCRIPTIONS.

It has been indicated in the preface that the hieroglyphic texts of Chichen Itza (and other sites as well) must be broken up into series, glyph pairs, and single hieroglyphs. Groups of two, three, and more hieroglyphs form the most important part of the inscriptions. These groups afford the greatest possibilities of interpretation owing to their frequency. In them we perceive clearly the variations of the component hieroglyphs in all their details, and notice the occasional substitution of signs at homologous places. The single hieroglyphs are less satisfactory material with which to work.

A full exploitation of all these approaches to the interpretation of Maya hieroglyphs can be made only when the Chichen Itza texts, and all the other inscriptions as well, are at our disposal in clear and reliable drawings. As only part of these texts is now available in this form, such studies would be incomplete at present. We must confine ourselves here to those inferences that may be drawn from our limited subject matter without incurring the risk of error, leaving more exhaustive studies for the future.

[p. 42]

Group 5

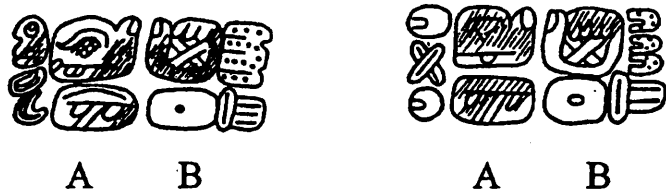


Figure 22.1. Four lintels: I, A B6; I, E F4

Figures 22.1 [A and B] are identical except for their prefixes. Both prefixes, however, have the same significance, “ending.” Possibly glyph B, the Hand with several affixes, has the same meaning, “ending.” Under the Hand-Corpse-Head we have for the first time an affix consisting of two straight lines and two loops, which we shall meet frequently in the following series.

[p. 120]

HIEROGLYPH SPONDYLUS-SHELL

The main sign of figures 22.2, 582–591 is some kind of shell, possibly one of the valves of the red *Spondylus*. The hinge lies generally to the left, and the opposite side is decorated by some strokes, while the interior contains three dots or circlets. There exist archaeological specimens of this shell in which perforations correspond to the circlets. We have already encountered this shell as glyph B of groups 11, 14, and 42.

Figures 22.2, 582–587 are variants of one and the same hieroglyph. The Shell is combined with the sign Tun (Muluc). In one case (Figure 22.2, 582) Muluc is employed in its plain form, in the others adorned with teeth. Figures 22.2, 582–585 are provided with an ending sign, but figures 22.2.6, 586 and 587 are without it. In figure 22.2, 585 an indistinct glyph is added to the Muluc-Variant.

The hieroglyph in figures 22.2, 588–590 was found in group 14 in association with another glyph. We repeat the description given there, that the main sign is the Shell with angularly stylized Flames and common suffix (in Figure 22.2, 589 postfix) Ten-Derivate. The ending signs differ in form; that in Figure [22.2,] 588 being rare and therefore correspondingly more important.

Figure 22.2, 591 looks almost like Ahau, but probably is also our Shell. It has a curious superfix. The three details below are worn and consequently are indistinct.

In Figures 22.2, 592–594 the Shell probably is not the main sign, or at least is only part of it. Below it appears a Serpent-Head (?) with Quincunx-Tun for eye, in Figure 22.2, 592. The principal sign of the combination, however, is the Dog-Head with protruding tongue and symbols. There are a circlet and several curved lines on the cheek, to the right a Double-Tun, and on top another, but less well preserved. Under the Dog-Head is a glyph composed of a line of circlets and a Flame, a rather common compound, but here relatively large.

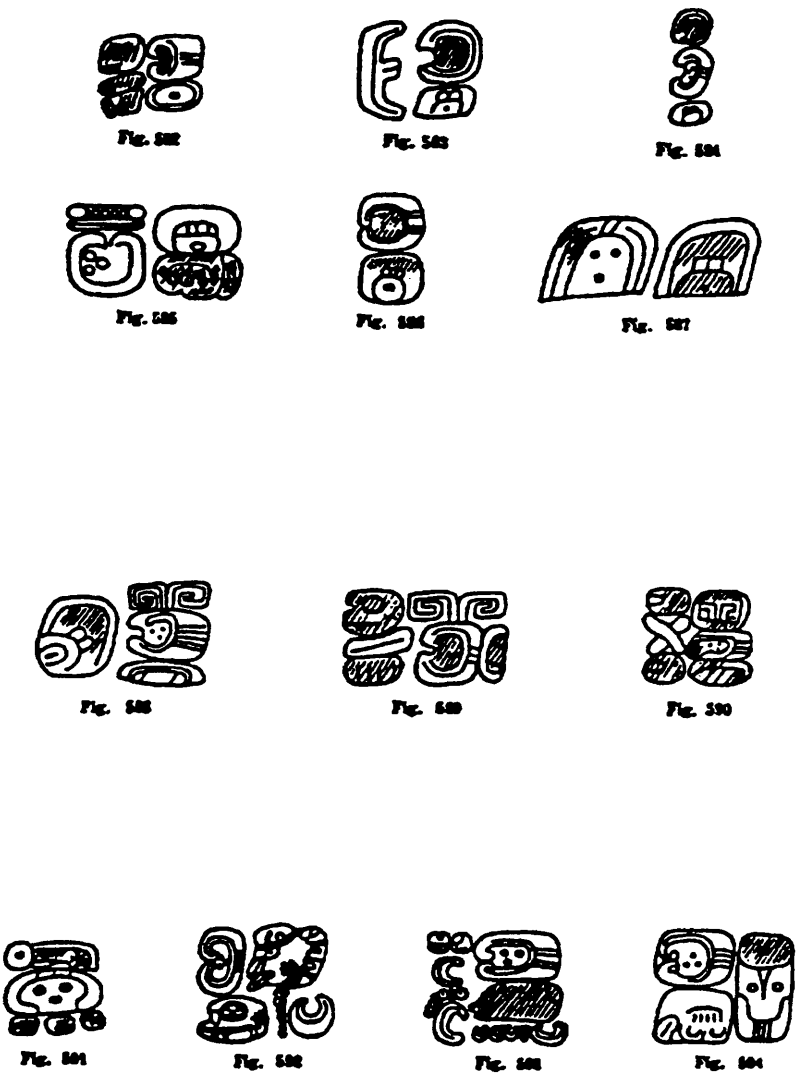


Figure 22.2. Shell compounds: shell compound 1; shell compound 2; different shell compounds

In Figure 22.2, 593 the head unfortunately is practically destroyed. Under and before it are again Flame and circlet compounds. On top to the left are two details which may or may not be Down-Balls. The Shell is in a good state of preservation.

The three component glyphic elements of Figure 22.2, 594 are fairly clear. On top appears Shell with its symbolic decoration, under it the mollusk we know from groups 19, 20, and 23. Behind is an elongated and inverted Ahau.

STYLISTIC DIFFERENCES AND RELATIVE CHRONOLOGY

A little less artistic, but still of good workmanship, are the great hieroglyphs of the Temple of the Hieroglyphic Jambs and the inscriptions of the Monjas group. For the latter we have the representation of figures on the Halakal lintel. The three personages here shown have the stiff hieratic grandeur of deities, but probably are priests impersonating gods.

TABLE III
EVALUATION OF ARTISTIC SKILL IN THE CHICHEN ITZA INSCRIPTIONS

Inscriptions	Artistic conception and execution
Akab Tzib	Good
Hieroglyphic Jambs Monjas group	Fairly good
All Itza inscriptions	Mediocre

Figure 22.3. Evaluation of artistic skill in the Chichen Itza inscriptions

All the hieroglyphs and sculptures of the Itzas proper are artistically inferior to the former. The sculptor of the Akab Tzib was a Maya artist and so probably were the less gifted sculptors of the Monjas and Halakal lintels and of the hieroglyphic inscription in the Casa Colorada. The Itza inscriptions are the work of artisans lacking higher artistic taste and ability. There is considerable variety in the form of the hieroglyphs of Inscriptions IX–XX, and even one longer text, the Hieroglyphic Band of the Caracol, is composed of several different parts. The style of these sculptures is somewhat individual, although the variations do not deviate from the type forms indicated for Inscription XI.

Figure 22.3, then, shows that the Itza texts can be separated from the others by this method of artistic evaluation.

TABLE IV
COMPOSITION OF DUPLEX GLYPHS

Inscriptions	1	2	3	4
Initial Series 1 Monjas 1, 2, 3, 4 Casa Colorada				
Three Lintels 1, 2 Hieroglyphic Band 4 Four Lintels 1, 2, 3				

Figure 22.4. Composition of Duplex Glyphs

Figure 22.4 gives another division of the hieroglyphic material in two groups, namely, one including the earlier inscriptions, the other the later ones. Here the two possible arrangements of the parts and not the ethnic or aesthetic factor are the basis of classification.

“Die Entzifferung der Mayahieroglyphen: Ein unlösbares Problem?”

Paul Schellhas

Disillusion marked the final years of one of the most successful early pioneers of Maya epigraphy, Paul Schellhas. His identification of the figures and name glyphs of deities in the codices (1897, 1904) was among the first to elucidate noncalendrical glyphs. Methodologically, it anticipated a method Berlin and Proskouriakoff later used to identify personal names in texts of the Classic period—the detection of patterns based on the physical proximity between signs and depictions of their referents.

Throughout his life Schellhas lived in Berlin, where he worked as a judge while dedicating his spare time to research on Maya writing. With encouragement from Ernst Förstemann, he published his first contribution to the field in 1886, a study of the Dresden Codex. Most of his subsequent papers dealt with the analysis of codices.

Schellhas' "retrospect," included here, reflects the pessimistic mood prevalent in the mid-years of this century, particularly among those who had labored long and hard on decipherment, but without witnessing any comprehensive breakthroughs. In the preceding decades, scholars had made notable advances in understanding calendrical and astronomical matters, but noncalendrical texts remained impenetrable. The methods applied so far to the problem were unlikely to produce any further results. Instead of searching for new approaches to decipherment, Schellhas concluded that the problem stemmed from the recalcitrant and opaque nature of the script itself, which in some ways was more intricate than other ancient systems. Perhaps Schellhas' heavy pessimism, rejecting all linguistic content and denying the presence of the verbs so clearly evident in the Dresden Codex, was reinforced by the dark atmosphere of his final years in wartime Berlin.

When, despite all attempts, a scientific problem has defied a solution for over 70 years, must one then accept that a solution is impossible and that further attempts are in vain? This question may rightfully be raised with regard to the decipherment of Maya

hieroglyphs. For it has been about 70 years since Abbé Brasseur de Bourbourg first published a truly fantastic attempt to decipher the Codex Tro (Manuscrit Troano: *Études sur le système graphique et la langue des Mayas*, Paris, 1869/70), which Léon de Rosny only shortly thereafter assessed as: “*de ce, que Brasseur a déchiffré il ne reste rien*” [of that which Brasseur has deciphered, nothing remains]. Meanwhile, Rosny’s own attempts were equally unsuccessful. Still, both were the first pioneers in this field. These failures may well have deterred others, since further attempts of well-known and serious Americanists did not materialize for many years.

In 1897, I first succeeded in achieving a partial success in the publication *Die Göttergestalten der Mayahandschriften* [The Deity Figures of the Maya Script], Dresden, 1897, which appeared in a second edition in Berlin in 1904, as well as in an English translation in the *Papers of the Peabody Museum* (Vol. IV, No. 1, Cambridge, Mass., 1904). At that time, the interpretation of the deity figures, their hieroglyphs, and the hieroglyphic symbols belonging to those had reached an uncontested status, so that my suggested interpretation of the symbols of the deities, whose names were in large part unknown, was widely accepted in the research community. Since then it has not been possible in regard to this problem to take any further steps in a direction that will enable us to read and understand the meaning of longer hieroglyphic texts. Meanwhile, the present state of the research does in any case enable us to form an opinion on the question raised in the title of this paper. We are no longer in the dark about the difficulties and obstacles facing this problem.

We know nothing about the original history of the origin and development of Maya hieroglyphs. There are no findings that allow us to recognize a primitive stage in their script. They appear on the earliest monuments essentially in their finished form. Furthermore, we only know that they have been basically the same in the entire Maya area for about 700 years. Beyer’s “stylistic history” of the Maya hieroglyphs only pertains to the history of outward morphology. We do not find any organic development, perhaps from ideographic conceptions of things to phonetic signs of sounds, as in the Egyptian hieroglyphs. If one accepts that they were the invention of an individual, the way it has happened repeatedly in recent times with respect to Egyptian hieroglyphs, then certainly in the history of Maya hieroglyphs nothing stands in the way of that, in any case at least not the fact that during its unaltered existence of several hundred years in the entire Maya area one can not find any progressive development in its nature in any direction. And that must also hold true for the entire artistic and complicated system of Maya reckoning of time, with which it is closely connected, and which has undoubtedly cooperated fully in its creation and which still existed, although not without change, after the Spanish conquest mentioned in the “Books of Chilam Balam.”

When one compares the Maya hieroglyphs with any kind of hieroglyphs of other people, perhaps with the most well-known ones of the ancient Egyptians, or the original ideographic writings of the Chinese script, and also with all other ideographic prototypes of European and Asiatic scripts as far as they are known to us, indeed even with the signs on the wooden slabs from far-away Easter Island, then immediately an essential difference appears between Maya hieroglyphics and all others, a singular peculiarity, that is, its complexity, its composition of several individual parts that also occur by

themselves as independent hieroglyphs, in contrast to the simplicity of all others. While the Egyptian hieroglyphs portray clear, simple things like people, animals, objects, and the like in few drawings, and in a typical manner, the Maya hieroglyphs show almost without exception a combination of several, often 3 to 4 symbols, some of which also appear singly, independently, and in variants. While in the Egyptian hieroglyphs most clearly recognizable things appear in quite realistic drawings, especially in the so-called determinatives, which again portray things or categories of things ideographically, the depicted objects in the Maya hieroglyphics are always represented symbolically, and their meaning is often hard to recognize, a situation that forces one to distinguish several secondary signs beside the main sign in a hieroglyph. Among the Maya hieroglyphs there are only very few that consist of a single sign, and even these are almost exclusively the chronological calendar signs, the 20 days of the Tzolkin, or other concepts with a temporal meaning.

The large number of secondary signs, in the form of affixes, superfixes, and subfixes to the main hieroglyph, from which the entire square composite of the hieroglyph is made up, makes interpretation considerably more difficult, since all these signs refer to a difficult-to-perceive mythological symbolism, in which we have no guidance, and which does not receive the light of historical tradition. Even though Herman Beyer, the successful pioneer in this area, seemed to explain correctly the meaning of some of these secondary signs, a general interpretation of the context is still lacking. We have the parts in our hand, but sadly lack the intellectual connection between them. It is as if one were to recognize the meaning of individual characters in a foreign language, without being able to read the script as such.

A further obstacle in the decipherment of hieroglyphs in the codices and on the monuments is the difference between the script of both types. The hieroglyphs on the stone monuments, building walls, reliefs, and stelae are in many cases much different from those of the codices, and are hard to identify with these. There is a difference between the two types of script, such as between modern European, so-called Roman script and German Gothic block letters.

Still there can be no doubt that the hieroglyphs of the stone monuments, like those of the codices, belong to one and the same system during the entire time of their occurrence. There are no substantial local or temporal differences, neither according to regions in which perhaps different dialects of the Maya language were spoken, nor according to age, especially in the many cities of the old empire with its rich written material on stelae and architectural reliefs from various centuries and distant regions. Obviously, there has been only *one* system of these symbols in all Maya areas and all of time. Therefore, we must also accept a single origin. With a little bit of fantasy one can easily imagine that the system was the brainchild of an especially gifted priest in a priestly school, a supposition that is by no means far-fetched, when we remember the many tremendous intellectual performances of religious founders, such as Mohammed, Buddha, or Confucius. For the rest, all interpretations are obscured by a thicket of impenetrable, unknown symbolism, with the sole exception of a small number of easily intelligible and simple signs that for the most part pertain to the reckoning of time and astronomy. Any larger grammatical coherence of the hieroglyphs is as of yet out of the question. The meaning

and the reason for the long rows in the inscriptions on dated stelae and temple walls still remain a mystery. We don't even know whether their content is of a historic, astronomic, or purely mythological variety, and can only guess at the association of the so-called prehistoric dates on the well-known relief in the Temple of the Cross in Palenque (1137 to 3379 before Christ, according to Spinden), which could only indicate an astronomical-mythical theme.

Finally, it is not hard to realize that a promising possible approach to an interpretation of the content of the hieroglyphic symbols is offered in only those cases where the inscriptions are accompanied by pictorial representations, as in the codices, on many stone monuments, and on a few other objects, such as, for instance, the painted clay vessels, which contain depictions of scenes with inscriptions that obviously refer to them. It should be perfectly acceptable that if, for instance, in the Codex Dresden God B is pictured standing in the rain, or fishing in the water, or when in the Codex Madrid a scene is depicted in which a man uses an axe to kill a rattlesnake that bites him in the foot, then the hieroglyphic signs found below it must in some way refer to the preceding scenes, and must include concepts like rain, water, fish, snake, bite, foot, axe, et cetera. A close examination of the Codex Madrid in this regard (*Zeitschrift für Ethnologie* 61, 1929, pp. 1ff.) has produced a negative result that is in essence completely negative. The inscriptions accompanying the illustrations do not offer any clue. Only those same hieroglyphs were repeated that occurred in other places as well.

Some very suitable objects, which due to their peculiar, interesting, and clear pictorial representation, accompanied by hieroglyphic inscription, almost challenge one to decipher them, indeed whose appearance give the idea that one could easily imagine what the hieroglyphic text could mention, are especially worthy of mention. They are the well-known Stela 12 from Piedras Negras, with the interrogation of captives from various tribes, as well as the beautiful clay vessel from Chamá with the welcoming scene, and a few other objects that unfortunately all depict particularly rare things. They too have offered no clue for arriving at an explanation of hieroglyphic inscriptions (compare *Zeitschrift für Ethnologie* 1934, 416 ff. and *Mitteilungsblatt der Deutschen Gesellschaft für Völkerkunde* 1939, 64 ff.).

Another example that hints at an explanation is one from the section with astronomical content in the Dresden Codex, p. 24, [Figure 23.1] a spot that shows, without "illustration," but alongside the calendar of the planet Venus, an inscription of forty hieroglyphs in three vertical columns, among which the hieroglyph for Venus appears eight times. Spinden, who illustrates and discusses this page of the Codex Dresden in his paper "Maya Dates and What They Reveal" (Brooklyn Institute, 1930), only mentions these hieroglyphic columns in passing, and remarks that the Venus sign appears eight times, and several times it is even connected with the hieroglyphs of the four cardinal directions. That last item is apparently an error, since the well-known signs of the four cardinal directions are nowhere to be found near the Venus glyph. At any rate, we certainly must accept that the planet Venus shows some connection to the content of the columns, whether in their astronomical or mythological sense, the latter of which is more likely, since the signs apparently have a symbolic meaning that can not be of a purely calendrical type. Otherwise their content remains mysterious.

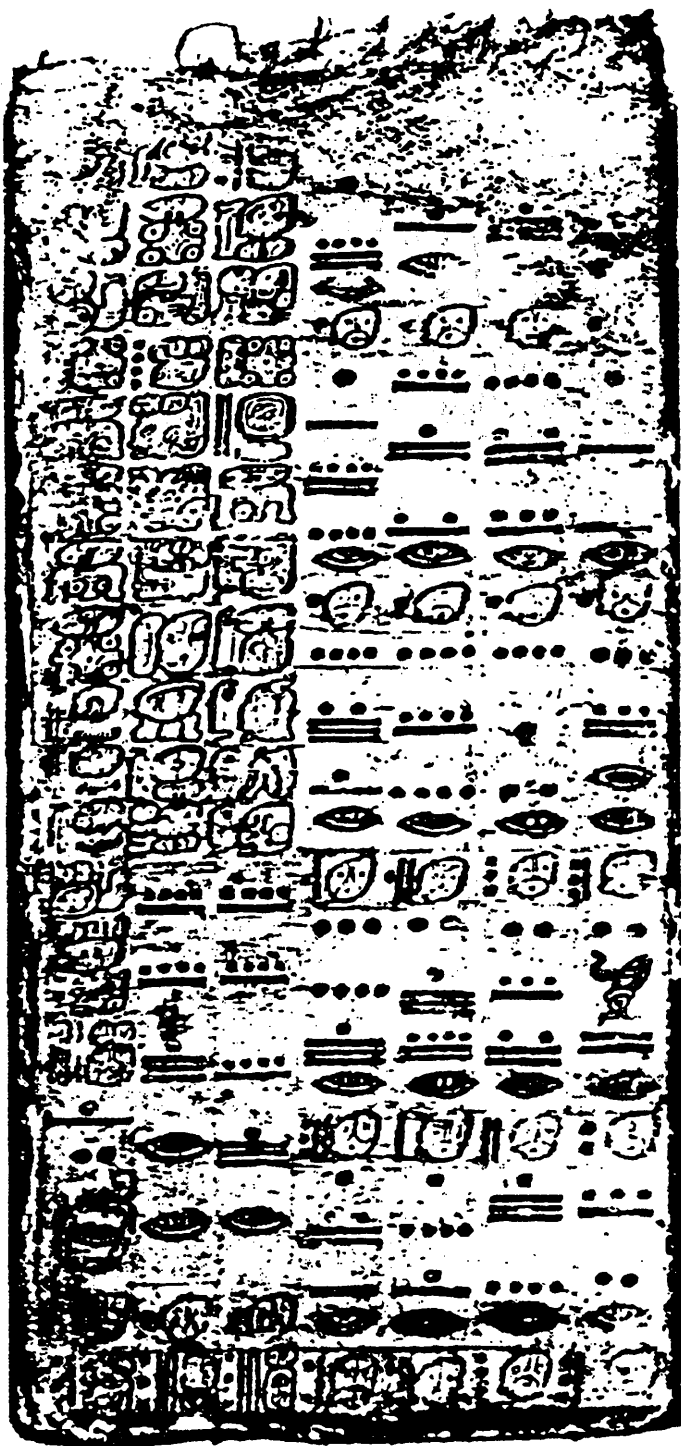


Figure 23.1. Page of the Dresden Codex

No real progress has been made in the area of glyphic decipherment since the publication of my paper "Die Madrider Mayahandschriften" [The Madrid Codex] in 1929 in the *Zeitschrift für Ethnologie*. I must still consider the conclusions about the art of Maya hieroglyphs and their interpretation that I drew from the investigations of the Codex Madrid to be correct. In essence, they state that the "Maya script" consists of a limited number of ideographic pictures for certain frequently used concepts, among them mainly hieroglyphs of gods in the form of heads, and symbols belonging to them. These concepts seem to be exclusively of a nominal type. It is doubtful that we can even find verbal ideograms representing actions. The ability of hieroglyphs to adapt to grammatical forms of speech that might indicate declension or conjugation does not exist. The "script" does not once show a plural. Nowhere do we find any alteration of known hieroglyphic form that can be interpreted as grammatical modification, declension, or conjugation of verbs.

Furthermore, it is impossible to find symbols for certain frequent and everyday concepts such as water, rain, house, animal, man, et cetera, in the Maya hieroglyphs. In the scripts of all people such words exist—why not here? Obviously because these hieroglyphs do not possess symbols for such concepts, and, as far as we know from the three codices that are left to us, because they are limited to a certain number of religious, mythological, and chronological ideas that occur again and again.

The Maya hieroglyphs are incapable of expressing grammatical sentences. The groups of symbols beside the pictures in the Codex Madrid are not explanations of them. They merely represent a stringing together of ideograms, which, moreover, often repeat themselves at the same spot in different columns of the section.

Matters are no different in the stone inscriptions of the reliefs and stelae than in the hieroglyphs of the codices. When they do not contain chronological statements, or dates, they show many heads with mythological meaning, and ideographic signs, part of which can be recognized as sculpted variants of known symbols. The requirements of what, in our minds, makes up the essence of a script, that it reflect speech, obviously do not fit the Maya hieroglyphs at all. Here we have signs that do not possess the ability to adjust to the forms of living speech. We merely see the ideographic reproduction of a limited number of certain concepts, mostly of a mythological, chronological, or calendrical type, whose meaning is still largely unknown.

A definition of the essence of Maya hieroglyphs, as I have said in the paper "Zur Entzifferung der Mayahieroglyphen" [Toward a Decipherment of Maya Hieroglyphs] (*Mitteilungsblatt der Deutschen Gesellschaft für Völkerkunde* 1939, No. 9), must read somewhat like this: Maya hieroglyphs are the ideographic symbols for one aspect of the intellectual culture of the Maya, a type of hieratic symbolic script, for "scientific" purposes, as we might say according to the modern view, which considers astronomy, astrology, reckoning of time, and mythology a science in these senses.

When, according to the accounts of the Spanish authors Landa, Petrus Martyr, Ponce, Lizana, Aguilar, Villagutierre, and others, the content of the hieroglyphic works of the Maya should have also depicted historical things, epidemics, tornadoes, floods, legends, rituals, laws, ceremonies, offerings, medicine, agriculture, etc., then these fragments of writing should have used entirely different hieroglyphs—perhaps of a more profane type

than the sacred ones that we have recovered—of which nothing has been preserved. Truly new written material is hardly to be expected from eventual inscriptions on stelae and buildings from new excavations and new publications, and would, based on the reasons listed above, hardly offer much further help.

And thus the question posed at the beginning can unfortunately only be answered in the affirmative: we should not expect to attain a full and satisfying decipherment of Maya hieroglyphs. The problem may be added to the many unsolvable scientific problems, for whose solution ethnologists in many different parts of the world wait in vain.

The Rise and Fall of Maya Civilization

John Eric Sidney Thompson

*Several authors have examined the role of J. Eric S. Thompson in shaping the predominant interpretations of ancient Maya civilization around the middle years of the twentieth century (Becker 1979; M. Coe 1992). His intellectual breadth and ability to reach wide audiences made his work both authoritative and controversial. Today, however, his overall interpretation of Maya civilization and writing is outmoded. Thompson's views on the latter are succinctly recounted in the paragraphs that follow, taken from the revised edition of his general book *The Rise and Fall of Maya Civilization* (1966). Maya writing is described as a combination of ideographic signs and "a simple phonetic writing which might be described as an advanced form of rebus writing." To Thompson, the contents of the texts primarily concern the passage of time and "the names and influences of the reigning gods of each of its divisions." He concedes that some of the texts deal secondarily with the lives of rulers, but still adheres to his earlier notions on the predominant subject matter of Maya glyphs.*

*Although his general synthesis of Maya writing has proved incorrect, Thompson produced many valuable, long-lasting contributions. His early works discussed calendrics and chronology, beginning with a modification of J. T. Goodman's correlation of the Maya and Christian calendars (Thompson 1927), which remains the most widely accepted solution for this intricate problem. He elucidated the cycle of Glyph G and the Supplementary Series (1929) and the 819-day cycle (1943b) and grasped the significance of the "directional count glyphs" (1943c, 1944b). He wrote many papers interpreting particular sets of dates, such as dates in the "Yucatec style" (1937), and shifted calendar rounds (Proskouriakoff and Thompson 1947). In addition, later research has confirmed some of his original readings of noncalendrical glyphs, such as syllables **te** and **tu**, although he did not regard the signs as syllables per se, but as monosyllabic words. Thompson's method for determining these readings involved a "chain of imagery" that drew heavily from documentary and ethnographic sources as well as iconographic interpretations. These "chains" allowed him to establish associations between symbols, often based on concepts deduced from his understanding of Maya words and "thought processes." Many of his best readings were founded on parallels between hieroglyphic inscriptions and Colonial Maya texts, of which he*

had a good command, thanks to his close relationship with Ralph L. Roys. But just as often Thompson's method, so frequently mystical and reliant on empathetic assumptions, led him to erroneous and fanciful speculation. Thompson's approach to decipherment was largely borrowed from Eduard Seler, who applied similar methods to Mesoamerican iconography and texts. Thompson also perceived the value of Hermann Beyer's patterns of substitution between signs, which he applied in several instances.

In 1950, Thompson published a comprehensive treatise on Maya writing, dealing extensively with the calendar and astronomy and to a lesser extent with his proposals for reading noncalendrical signs. Somewhat later, he followed this with a valuable catalog of the glyphs (1962), which superseded earlier catalogs by William Gates (1931) and Günter Zimmerman (1956), who focused mainly on codical signs. His last monograph on Maya writing was an annotated edition of the Dresden Codex (1972a). This work strikes us today as at once impressive and poignant, for Thompson eschewed a phonetic interpretation that would have made these texts more comprehensible.

This was Thompson's weakness. He was fiercely critical of interpretations he considered unsubstantiated, but sometimes upbraided colleagues in ways that showed an inordinate fondness for rhetoric and special pleading. His least-favorite proposals were Herbert J. Spinden's (1924) correlation proposal, dismissed by most Mayanists after long debate, and Benjamin Lee Whorf's phonetic readings. Early in his career, Thompson adopted the opinion of most turn-of-the-century scholars that Maya writing was nonphonetic; to him, Landa's "key" opened few doors. Once again, Thompson's major influence was Eduard Seler. Thompson's criticism of Yuri Knorosov's phonetic interpretation—which appeared shortly after the publication of his major treatise—contributed significantly to its delayed appreciation. Knorosov's approach ran counter to most of his own statements, and he also felt politically alienated by the exaltation of Knorosov's work by Soviet propagandists, who presented it as a triumph of Marxist-Leninist thought. Most Western epigraphers of Thompson's generation shared his skepticism toward phoneticism—Tatiana Proskouriakoff never endorsed it publicly (although records left after her death showed considerable interest), while Heinrich Berlin did so only in 1984, after Knorosov's proposals had been thoroughly digested by other scholars. Thompson was its most vocal critic, however, and his standing in the academic world made his censure highly influential.

J. E. S. Thompson's career in Maya archaeology began in 1926, when he joined the Carnegie Institution project at Chichen Itza after graduating from Cambridge University in his native England. As a field archaeologist, he worked most extensively in British Honduras, while also contributing to field studies in Yucatan and the southern coast of Guatemala; his contacts with modern Maya in Belize (mostly refugees of the Caste War) helped develop his attitudes about Maya thought (Thompson 1930). Between 1927 and 1935, he was assistant curator at the Field Museum of Natural History of Chicago, after which he joined the Carnegie Institution as a staff member, retiring in 1958. In addition to Maya writing, which was the major focus of his research, he also made important studies in the closely related fields of iconography and Maya religion. As an offshoot of his early fieldwork, he wrote ethnographic accounts of the contemporary Maya; still later in his life, he immersed himself deeply in the documentary sources of the Colonial period, in which painful controversies did not intrude so heavily. One of his latest books, *Maya History and Religion* (1970), posed compelling questions about the ethnohistory of the Putun and Chontal Maya, which have stimulated much research.

HIEROGLYPHIC WRITING

Middle America is the only part of the New World in which a system of embryonic writing developed. The Aztec and other peoples of Mexico had books, but in them the information is largely in the form of picture-writing, and the glyphs that are scattered through them or carved on stone are with few exceptions pictorial. The day signs—snake and house, for example—are illustrated by pictures of those objects, and even rebus writing appears to have been somewhat rare before the arrival of the Spaniards. (Rebus writing is the system in which one writes a sentence such as “I can see Aunt Peg” by drawing an eye, a can, waves, an ant, and a peg. That is, one reproduces the sound, not the meaning.) Aztec glyphs consist almost entirely of calendar signs and glyphs for persons and towns, and as individuals and towns usually were named after animals or objects, their depiction was simple.

Maya hieroglyphs were sculptured or, more rarely, incised on stone stelae, altars, ball-court markers and rings, steps, panels, walls of buildings, lintels of stone or wood, and wooden ceilings. They were modeled in stucco; incised on personal ornaments, such as jade and shell; and painted on pottery, on murals, and in books. They are far more numerous and more complex than those of the Aztec.

The earliest glyphs may correspond to highland Maya speech. For instance, the day Jaguar is called *Ix* or *Hix* in Yucatec, a meaningless word, but in Kekchi, a highland Maya tongue, *Hix* is still the name for jaguar. The sound values of many glyphs probably correspond to lowland Maya of about A.D. 200 ancestral to, and fairly closely resembling, the still nearly related Chol, Chontal, Chorti, and Yucatec. Still others, confined to the codices, are of later origin and correspond to Yucatec of just before the Spanish Conquest. An example of this last is the glyph for severe drought, *kintunyaabil*, the parts of which correspond to Yucatec speech (Figure 24.1, 30 left).

I believe that the Maya had neither an alphabetic nor a syllabic writing except insofar as most Maya words are monosyllables. There is a considerable use of a simple phonetic writing which might be described as an advanced form of rebus writing in that the picture has become so conventionalized that the original object is no longer recognizable. For instance, the curious object in Figure 24.1, 10 is the symbol for tree, *te* in Maya. We find it combined with the symbol for red, as the red tree of the East in Codex Dresden. The sound *te*, but totally unconnected with the idea of tree, was also affixed to number in counting months. In hieroglyphic texts the same symbol is used. Figure 24.1, 13 records the third (ox) day of the month Zotz' (*bat*)-*oxte* Zotz'. Again, an important god was called Bolon Yocte, and his name may mean something like “nine paces there.” His glyphs show the number nine, the glyph for *oc*, ‘dog,’ and the *te* sign (Figure 24.1, 11–12) although neither dog nor wood have anything to do with his name.

Similarly, *u* means “moon” in several Maya languages, but it is also the possessive “of.” The lunar glyph may refer to the moon, but it is also used as the possessive, and even can stand for the number twenty (Figure 24.1, 6). An example of old-fashioned rebus writing is supplied by the Maya sign for “count.” In Yucatec the word *xoc* means “to count,” but it was also the name of a mythical fish which dwelt in the sky and to which worship was made. As the Maya had difficulty in rendering an abstract idea such

as “count” in glyphic form, they turned to rebus writing and used the head of the *xoc* fish as the glyph for *xoc* “count” (Figure 24.1, 15, 17).

Ideographic glyphs were used rather extensively by the Maya. For example, the head of the *xoc* fish was not easy to carve and might be confused with the head of some other fish or of some animal—there are many animals in Maya mythology which no zoologist would recognize. The Maya, therefore, often substituted for the picture of the fish an ideograph, the symbol for water, apparently with the idea that water, as the element in which fish live, recalls the *xoc* fish. The symbol for water was a jade bead, because water and jade were both precious and green (Fig. 24.1, 14, 16). Thus jade equals water equals *xoc* fish equals *xoc* to count. The system is extremely complex.

A good example of an ideogram is the frequent combination of the seed glyph (Figure 24.1, 35) with the earth glyph to form the sign for milpa, cornfield (Figure 24.2, h). However much the name for milpa might differ from one Maya language to another, the combination of the two signs seed and earth would always be recognizable as cornfield. In the picture which accompanies the glyphs (Figure 24.2, h) the rain god with planting stick in hand is walking on the cornfield glyph. Metaphorgrams are another feature of Maya writing and pictures. The vampire bat, common in the Maya lowlands, supplies a glyph which is combined with that for sacrifice, apparently to indicate human sacrifice or a sacrifice involving blood, a natural metaphor in view of the blood-sucking of the vampire. Again, the bat rests head down. A rare glyph is the inverted head of a bat. This, used only with the katun glyph and its number, indicated that that particular katun had come to rest, that its journey in the unending march of time had ended. What a striking and obvious metaphorgram for the abstract idea of rest! A Maya metaphor for drought was *cim cehil*, “the deer die.” We find a picture of a dying deer in one scene and the drought glyph (Figure 24.1, 30) is in the text which the picture illustrates. “The deer die” is a metaphor for severe drought, because, as Yucatán lacks streams and ponds, the deer die of thirst in time of extreme drought. “Maize in bud” was a charming Maya metaphor for a youth of marriageable age. Glyphs of sprouting maize in contexts treating of marriage seemingly are metaphorgrams for these youths.

A knowledge of Maya thought processes is often necessary to understand Maya glyphs: a divinatory almanac running across Codex Dresden pages 31–35 has four similar scenes of Chac, the rain god, seated on a coiled snake enclosing a deposit or reservoir of water. From other sources we can be pretty sure that these are the water deposits from which the rain gods dip water to sprinkle on the earth in the form of rain. The glyph denoting these water deposits is a spiral with the number nine attached. A spiral is a common water symbol throughout Middle America. Special ritual water is called *zuhuyha*, *zuhuy* meaning uncontaminated, virgin, fresh; *ha*, water. However, *bolon*, the term for the number nine, is to this day used by the Maya in the sense of uncontaminated, fresh, etc.; that is, it is a synonym for *zuhuy*. The glyph 9 spiral therefore means fresh, uncontaminated water.

The chain of Maya imagery which leads to the equation nine equals fresh, uncontaminated, is as follows: The god of number nine is the Chicchan snake god, whose symbol (normally worn on his forehead) is the *yax* sign. *Yax* signifies green, but it is also used in Yucatec in the sense of new, fresh, first, first time, first born. Through the latter

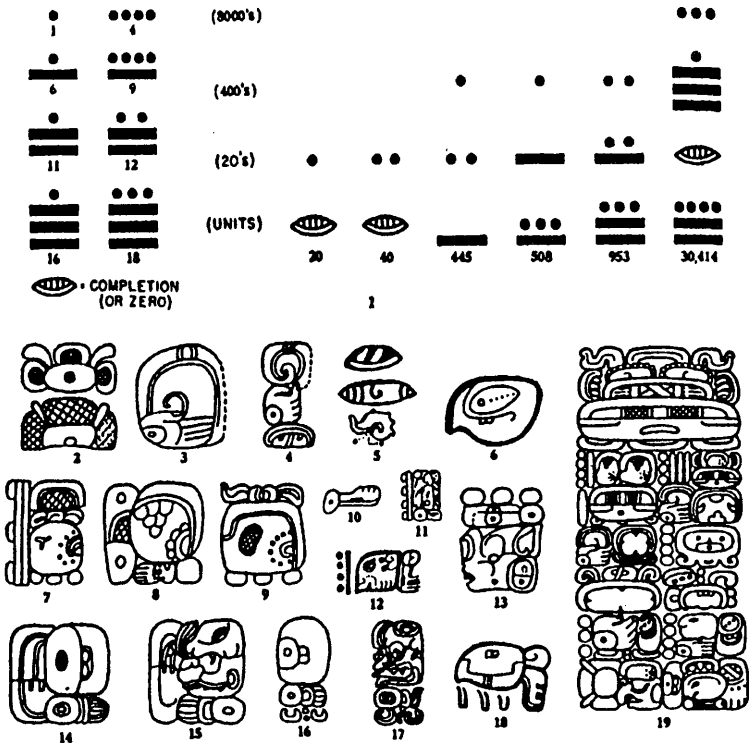


Figure 24.1. Examples of Maya hieroglyphic writing: 1: Bars and dots system of writing numbers; 2–5: Symbols for zero or completion; 6 Sign for 20; 7–9: Month sign Ch'en to show how the hatched element, representing black, can be at left of, above, or inside the main element; 10: *te*, sign for wood or tree; 11, 12: Glyph of the God Bolonyocte, composed of number 9 (*bolon* in Maya), the *Oc* sign, and *te* element; 13: month position 3-*te* Zotz'; 14, 15: Count forward to. The head of the *xoc* fish represents "count" (also *xoc* in Maya); or the water sign, the fish's environment, can be substituted. Element to left means "forward"; that below, "to." 16, 17: Count backward to. Forward sign replaced by element beneath. 18: Fresh maize. 19: An Initial Series date at Quirigua stating that 3,965 runs (or vague years), no months, and no days have passed (A.D. 795 in our calendar). The sun god is lord of the night, the moon is

meanings *yax* equates with *zuhuy* (for example *zuhuy akab* is the start of night, nightfall, *akab* being night, but *yaxokinal*, "newly set the sun" is practically a synonym). A parallel in our culture would be a sketch of a military figure standing in a boat or of a hand thrust into a wound (Mediaeval attribute of doubting St. Thomas) instead of writing Delaware or Missouri. It is because such thought associations lie behind many glyphs that I see little hope that computers can help, a matter shortly to be discussed.

A remarkable feature is that many, particularly calendric, glyphs have two quite distinct forms, which may be used indiscriminately. One is a head form; the other is a symbolic or ideographic form, usually some attribute or element, often highly conventionalized, which recalled the glyph to the reader. It is as though one were to write "St. Peter" or, instead, draw a picture of crossed keys. For example, the day Cimi, "death,"



three days old, and four moons have been counted. The day is 4 Ahau. 20, 21: The two longest calculations into the past, dates ninety and four hundred million years ago, are recorded. 22, 23: Death signs. 24–29: Glyphs for day, twenty-day month, *tun* or vague year, 20 *tuns*, 400 *tuns*, and 8,000 *tuns*. 30: Severe drought is the prospect for the year. 31: Drilling fire with sticks. 32: Very lucky. 33: Misfortune. 34: Rainy skies. 35: Seed. 36: Fainting spells. 37: Moon goddess. 38: Maize god. 39: East. 40: West. 41: Red world-direction tree. 42: The numbers 1 to 13 were gods, and at times the Maya carved and painted the head of the god to represent his number. Here in sequence are the heads for 1 through 10, 19, and completion. The Maya used “teens” as we do. The head for 19 combines the jaguar features of the god 9 (spots and hair around mouth) with the death symbols of the god 10 (fleshless jawbone).

could be carved or painted either as a head of the death god or as a symbol resembling the percentage sign, which was an attribute of the death god often painted on his body or clothes (Figure 24.1, 22, 23). To the initiated that symbol stood for the death god, just as the crossed keys recall St. Peter to the devout.

Most glyphs are compounds, consisting of a main element to which are attached various affixes. A prefix occurs to the left of, or above, the main element; a postfix is to the right of, or below, the main element. The choice of position for either a prefix or a postfix usually depended on artistic considerations, which generally meant a question of how best to fill the available space; but, with few exceptions, a prefix could not appear as a postfix or vice versa without changing the meaning of the glyphic compound. The glyph for “count” supplies a good example of a compound. The main element, as noted,

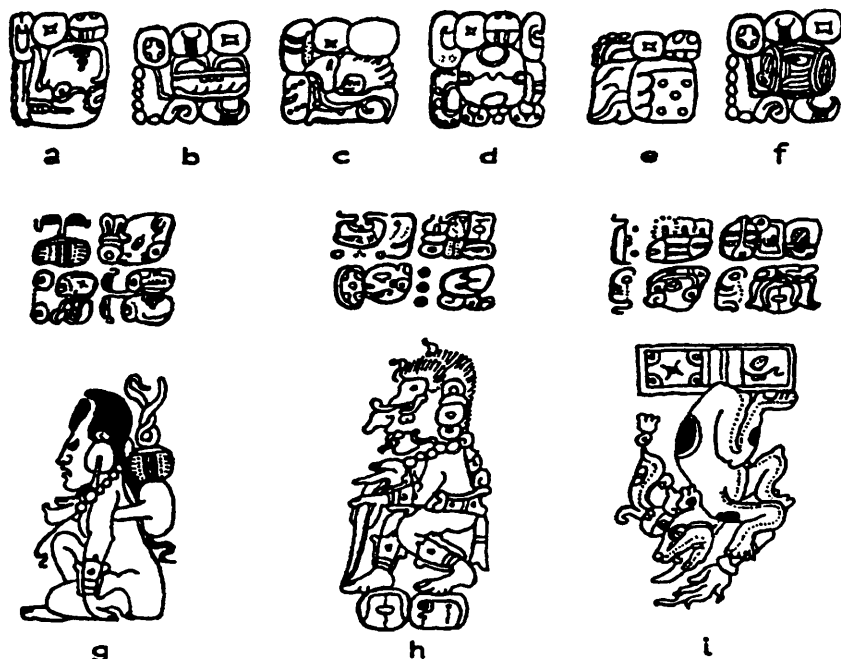


Figure 24.2. More Maya glyphs, (a)–(f), Emblem glyphs of Copan, Yaxchilan, Palenque (2), Piedras Negras, and Tikal and the Pasión confederation; (g)–(i), divination passages in Codex Dresden. Glyphs read top line left to right, then bottom line same fashion. (g) Glyph 1, “Skin diseases allied to smallpox” (*Kak*) are Glyph 3, “the divine fate” (*cuch*), which Glyph 2, “the moon goddess, Zac Ixchel,” has in store for us. Glyph 4: meaning unknown. Here is double use of rebus writing or punning. The fire symbol *kak* stands for *ka*, skin disease, and *cuch*, fate, in both the glyphs and the picture. (h): Glyph 1, meaning unknown; Glyph 2, “in the corn field or milpa”; Glyph 3, “the yellow Chac”; Glyph 4, “Very good tidings” or “great abundance.” The picture shows Chac, the rain god, with planting stick in hand, standing on the glyph for cornfield. This is an ideograph combining the glyphs for seed and earth. (i): Glyph 1, meaning unknown; Glyph 2, *pek*, sky; Glyph 3, sign for god with “woe to” prefix; Glyph 4, woe to the maize seed. *Pek* is the usual Yucatec name for dog, but it also means rains of little value, rainless storms, and by extension is a symbol for drought. As this text is in a weather almanac and the maize-seed glyph is in the context, we can be certain here that this again is rebus writing; *pek*, dog, is used for *pek*, rainless storms. The dog carries a lighted brand, a symbol of drought or great heat, confirmation of the proposed interpretation of the passage.

is the head of the *xoc* fish or the sign for water, its counterpart; the affixes are adverbs and a preposition, and change the meaning. The little torch-like element which occurs as a postfix in all examples (Figure 24.1, 14–17) represents the locative preposition *ti* “to,” “at,” or “from”; the prefix to the left or above is the symbol for “forward”; the third affix, never present when the “forward” prefix is given, is a postfix indicating “backward.” Thus, the affixes alter the sense. In one case (Figure 24.1, 14, 15) the whole signified “count forward to”; in the other case (Figure 24.1, 16, 17), “count backward to [or from].” Such variability,

for there are eight ordinary combinations of these elements, does not make the interpretation of the glyphs any easier, but all boil down to “add” or “subtract.”

Identified affixes include adjectives, adverbs, prepositions, and relationship terms, but Maya writing is so fluid that an affix can change places with a main element or it can be “infixd” in the main element; that is, the affix can be omitted and its outstanding characteristic added as a detail in the interior of the main glyph (Figure 24.1, 9). Similarly, two glyphs can be fused into one by combining the essential elements of both in a new glyph.

The Maya wrote simple sentences, but I rather doubt that they had affixes to express pronouns and tenses. Actually, verbs are rather weak in the Maya language; they can be described as verbal nouns. Thus we find in the divinatory almanacs sentences which can be tentatively translated as, “His influencing the maize, the death god. Heaped up death,” or as we might say, “The death god now rules the growing maize. Much death will be the result.” Three divinatory passages in Codex Dresden with translations are in Figure 24.2, g–i.

Most of the glyphs are still undeciphered, and, in the absence of an alphabet, progress is slow. There is no key or Maya equivalent of the Rosetta stone, save for the little information Bishop Landa gave us on the glyphs of the calendar. The decipherment of new glyphs does not appreciably simplify the task of tackling the remainder, as in a crossword puzzle or in a writing which employs an alphabet.

Maya glyphic research is now at an uncertain and frustrating stage. Recently, several students have claimed to have found the key to decipherment, but they agree on neither method nor results; for a common glyphic element there are as many decipherments as would-be decipherers. It is claimed that Maya writing is partly syllabic and alphabetic, a view I find hard to accept. However, an electronic computer in remotest Siberia has now been brought into action to substantiate that claim, but a computer is like a sausage machine—what comes out at one end depends on what was fed in at the other. Here is one result of its highly publicized work: scenes on page 20 of the Maya Codex Madrid show gods seated or kneeling, each in a sort of wooden cage, the crosspiece or roof of which they support with upraised hands. According to the computer, the accompanying glyphs tell us that brick-making is the activity shown. Apart from the fact that the pictures contain nothing remotely resembling brick-making, only in the region of the Grijalva-Usumacinta delta, home of the Chontal Maya, were bricks used (there is no building stone in the area). The Siberian group accepts the view that the language of the surviving Maya books is Yucatec Maya, and, indeed, there is overwhelming evidence that Codex Madrid did not come from the delta area. The Yucatec-Maya word *hi*, which the Russians say corresponds to one of the glyphs, does not mean clay, as they claim, but means the arenaceous temper mixed with the clay; the word *kak*, which they give as the translation of another glyphic element, means “fire,” not “bake,” as they inform us.

Something is awry when the computer comes up with a reading “quartz-sand fire,” which we are told means to bake bricks, and this is offered as the interpretation of scenes totally unconnected with brick-making in a book composed by a branch of the Maya who never made bricks. “Decipherments” of this kind serve only to illustrate how needful it is to know something about Maya ethnology and linguistics before undertaking

glyphic research. One person informed the world with exemplary modesty that he had deciphered the glyphs after only two months' study, whereas his predecessors, he added, achieved little or nothing in the best part of a century. Another, with equal disdain of the efforts of others, although willing enough to take their decipherments without giving credit, solved the problems thanks to a Marxist-Leninist approach.

We are back where we were nearly a century ago, at the start, when a rash of decipherments, each lot more fantastic than its predecessor, brought the subject into disrepute and led to the virtual abandonment of glyphic research for several decades. In a very different category and one productive of important results is the work on texts of the Classic period which treat of lay activities.

Most Maya glyphs are composed of several elements, a main sign and variable affixes. One common glyphic sign is found as a main element in combination with nearly eighty different arrangements of affixes or infixes. Some of these affixes may be variants of one another, thereby reducing appreciably the total of different meanings. Furthermore, affixes can not only become main signs or vice versa, but they can have both personified or symbolic forms. Moreover, as the Maya abhorred exact repetition, the sculptor (and, to a lesser extent, the scribe) often introduced every permissible variation when it was necessary to reproduce the same glyph several times in a text. In a recently compiled catalog I list 492 main signs and 370 affixes. Subsequent research will show some to be merely variations, reducing the total to perhaps 750.

In some inscriptions, principally composed of dates and calculations, most of the glyphs can be read; in others, which appear to deal with history or ritualistic matters, the percentage of deciphered glyphs is quite low; in a few texts not a glyph can be translated.

In many cases we know what the main element of a glyph signifies, but we cannot decipher the affixes; in other cases the reverse is true. The matter is further complicated by the different meanings an element can have; for instance, the glyph for *tun* (Figure 24.1, 26) can mean the approximate year of 360 days, or it can mean "end," or it can serve as an intensifier as in the glyph for severe drought, *kintunyaabil-kin*, "sun," *tun*, "intense," *yaabil*, "for the [whole] year" (Figure 24.1, 30), or means stone or rock ledge.

So far as is known, the hieroglyphic texts of the Classic period deal in part with the passage of time and astronomical matters, the gods associated therewith, and, probably, the ceremonies appropriate for these occasions. Recently, Miss Proskouriakoff has established that passages treat also of rulers, with dates which probably mark their births, their accession to power, and anniversaries thereof. Name glyphs of rulers, even of women, are given, and we are in a fair way to working out dynasties. Henry Berlin has identified glyphs which are probably those of city states.

In the historical fragments which survive in the colonial transcriptions called the Books of Chilam Balam, there is singularly little stress on the doings of individuals, and that only when individual behavior affected history.

Maya hieroglyphic writing was perfected primarily to record the passage of time, the names and influences of the reigning gods of each of its divisions, and the accumulated knowledge of the priest-astronomers which had a bearing on those subjects. Its use for other purposes was a secondary development. Again, Maya ingenuity was directed by an end which we would regard as impractical.

“Glyphic Substitutions: Homophonic and Synonymic”

Floyd Glenn Lounsbury

Floyd Lounsbury was one of the foremost anthropological linguists in the United States, with a body of work displaying a thoroughness, encyclopedic breadth, and sensitivity to semantic nuance that set it apart from much anthropological research. He was principally known for his work on the Iroquoian languages, especially Oneida, on which he prepared a doctoral thesis at Yale, submitted in 1949 and published in 1953 (Lounsbury 1953). More generally, Lounsbury, along with Ward Goodenough, deserved much of the credit for formulating the “Yale” school of formal ethnography and, in particular, the formal analysis of kinship systems, which explored shared and contrastive features as part of an overall study of semantic classification (Lounsbury 1964a, 1964b). The meticulous nature of his publications probably reflected his early training in mathematics and physics.

The attention to pattern and facility with language that characterized Lounsbury’s work in linguistics constituted his major contribution to Maya epigraphy, as did his research in ethno-numeration and astronomy (e.g., Lounsbury 1978). Although not all of his decipherments remain valid, he established new standards of glyphic decipherment, in which linguistic tools, such as the close scrutiny of allographic substitutions (or, in cryptographic jargon, “substitution ciphers”), substantially extend our knowledge of the script. In effect, Lounsbury introduced a level of rigor and careful argumentation that did not exist before. His insistence that weak “associations” of the sort connected with J. Eric Thompson’s work be evaluated in terms of Mayan languages opened many possibilities for collaboration with linguists. In raising our standards and laying out an acceptable (or at least explicit) methodology of decipherment, Lounsbury made possible many of the breakthroughs of the last twenty years.

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[pp. 167–68]

Hieroglyphs of the three forms shown in figure 25.1 are of frequent occurrence in the inscriptions of Palenque. Prior to 1950, and before either the reading or the meaning of these glyphs was known, Eric Thompson had already noted the fact that they were almost certainly equivalent signs in the Maya writing system. That he was able to do this, independent of any knowledge of the values of the signs, either phonetic or semantic, can be credited to his observation of glyphic substitutions, and to his anticipation of an analytic procedure based thereon that has become a basic tool for Maya hieroglyphic decipherment. This procedure—in linguistic terminology we would call it “distributional analysis”—consists simply in the study of signs systematically in relation to their contexts of occurrence. By itself, it sheds no light on either the meanings or the sounds that the signs once represented; it yields only patterns of co-occurrence and classes of substitutables among the hieroglyphs, or among their component elements. That is, it shows what can or habitually does occur with what else; and it shows what can replace what else in the same context or in the same class of contexts. These kinds of information, while not revealing directly either sounds or meanings, at least place some limitations on the hypotheses that can be entertained about them, inasmuch as they are indicative of equivalences among signs. These latter are of particular importance; they give us our alternative to a “Rosetta stone.” Whether such equivalences derive from homonymy, or from synonymy, or from membership in a common function class or common form class, remains in any given case to be determined from other clues, or from the pursuit of the same method of analysis extended to yet wider contexts.

In what follows there will be presented a few cases of apparent equivalence among glyphic signs, and among composite hieroglyphs, that have been posited on the basis of substitutions. There is hardly any better way to begin this than by reviewing what Eric Thompson had to say about some of the equivalences that he posited. Concerning the forms in Figure 25.1 he wrote as follows, under the heading of “Interchangeability of Affixes and Main Elements”:

Affixes and main elements do not form two separate groups, rigidly restricted as to function, for affixes could be used as main elements, and many main elements were also used as affixes. Figure 2.29 [here Figure 25.1, a] shows a main element with the ‘comb’ variant of the count sign as postfix to the right and an inverted Ahau postfix below



Figure 25.1. Three equivalent hieroglyphs (Thompson 1950: fig. 2, nos. 29–31)

[T602.25,178]. In Figure 2.30 [here 25.1, b] the main element has become a prefix, and the ‘comb’ variant of the count sign has been replaced by the personified or head variant of the same symbol, which serves as the main element. The same inverted Ahau postfix is still below, but now attached to the new main element [T602.738cv:178]. *The position of these glyphs in almost identical clauses makes it virtually certain that the essential meaning they convey is the same* (Thompson 1950: 38, with bracketed insertions of glyph identifications according to Thompson 1962, and of figure numbers from the present paper; emphasis added).

To continue with this comparison, it can be seen in figure 25.1, c (Thompson’s 2.31) that the erstwhile main element (respectively, prefix) of Figures 25.1, a and 25.1, b has here been replaced by a head-form sign of implied equivalent value, the other elements being selected and disposed as in Figure 25.1, a [T1023v.25:178].

There are some thirty or more occurrences of the composite glyphs of this substitution class in the inscriptions of Palenque. As was noted by Thompson, it is their substitutability in particular contexts that gives the clue to their equivalence. But further, it is the occurrence of these and their immediately embedding contexts in yet wider but equally special contexts (glyphic, chronographic, and iconographic) that provides the clues to their reference. The associations of the first type were already established at the time of Thompson’s writing; those of the second type have been secured more recently, applying what has been learned from Berlin’s and Proskouriakoff’s epoch-making discoveries. As a result, we know now what Thompson could not have known when he wrote the above-cited remarks, namely, that the three composite hieroglyphs which he hypothesized to be equivalent are in fact three alternative graphic representations of the principal name of an important king of Palenque. Clues to the linguistic value of the signs—that is, to the meaning and the pronunciation of the Maya word which they represented—have come from yet another substitution (with an iconic alternate) and from other contexts of occurrence of the separate parts of the glyphs, together with study of the lexicographic sources for the languages; and thanks to Kelley’s decipherment of this sequence of signs in another context (1962a), we know now also that this name consisted of one of the words meaning “shield,” that its pronunciation was Pacal, and that the component signs in Thompson’s examples had the following phonetic values: (1) the oval sign with internal cross-hatching [T602] and the face with the somewhat similar cross-hatching [T1023v], both phonetic *pa*; (2) the so-called ‘comb’ affix [T25] and the second head-form glyph [T738cv], both phonetic *ca*; and (3) the inverted ‘Ahau’ [T178], singly or paired, phonetic *la* or *al*, or *l* either before or after *a*.

Thompson continued his discussion of interchangeability with yet other examples, the first of which were the signs for the months Mac and Tzec. These, like the previous ones, also attest to the mutual substitutability of the so-called ‘comb’ and the ‘fish head’ (T25 and T738c/cv) and support further the hypothesis of their functional equivalence. The ramifications of the Mac and Tzec examples, the latter originally Cazew, are far-reaching; so much so, that consideration of these is best reserved for another occasion.

We pass instead to Thompson's next example, the interchangeability of the affix T23 and the head-form main sign T1000a/b in the context of Glyph F of the supplementary series.

[pp. 182–83]

CONCLUSIONS

It will be recalled that Thompson had posited a phonetic value of *te* for T23, a value that was dismissed as untenable in the first section of this paper. It was the second affix to which he had assigned that value, the first having been the 'wood' or 'tree' sign, T87; hence his designation of T23 as *te*(2). Barthel (1954) was the first to question Thompson's *te*(2) hypothesis, which he did on the grounds that, between the two signs—the secure *te*(1) 'tree' and the hypothetic *te*(2)—mutual substitution does not occur. Neither in the glyphs representing the celestial trees nor in the nominal glyph Bolon-Yoc-Te does T23 substitute for T87 (Barthel 1954: 47, with substitution of the Thompson numbers T23 and T87 for the equivalent Zimmermann numbers 79 and 82 there employed). Considering then one of the linguistic possibilities offered by the suffix system of Yucatec Maya—one that is much in evidence in lexical and textual sources—he was led to posit, "as a working hypothesis," a phonetic value of *al* for the affix T23. This, however, is not the one that has emerged from the present review. We agree with Barthel's criterion for rejecting Thompson's proposed value for this sign; it was a criterion adumbrated by Thompson himself, which, had he applied it to this case, would have caused him to abandon the *te*(2) hypothesis. But the same criterion, mutual substitutability, has led now to a hypothetic value for T23 that is different also from Barthel's, namely, to a value of *na*, or, in some contexts, final *n* after a vowel *a*. It will be remembered that Barthel was explicit concerning the tentative nature of his proposal.

As of the present date, the *na* hypothesis appears to be the only tenable one, indeed the only possible one. It was first put forward by Knorozov (1955b), and it was adopted, or derived anew, by Evreinov, Kosarev, and Ustinov (1961: vol. 2, 253). The present writer came to it by his own route, finding only afterward that both Knorozov and the Novosibirsk computer group had already proposed it. Knorozov, it should be mentioned, also offered the value *xam* for the prefix to the 'north' glyph which was discussed in section 10f, which had not been properly distinguished from T1 and T23 by earlier writers. His analysis of that glyph is essentially what has been maintained here also. Testing of the hypothesis must continue. Many of the contexts of T23 remain unread

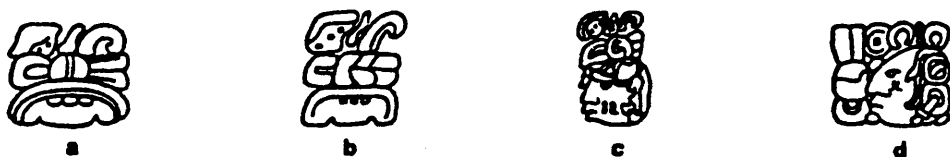


Figure 25.2. Some variant forms of Glyph F (Thompson 1950: fig. 34, nos. 60–61, 63, 68)

because of other accompanying components that are still not understood. Such is the case with Glyph F of the Supplementary Series (section 2 above; Fig. 25.2). Though we think we have the correct value for the final component (T23, T537, or T1000a/b) of that glyph, the central element (the knot and its substitutes) remains uninterpreted and no plausible hypothesis is as yet discernible. The situation with respect to the presumed sacrifice glyph (section 4 above) is somewhat different. The values of all of its parts seem firmly established; one supposes that it must have been read *nawah*. But it has not been possible to verify the reading, i.e., to find a verb of that form with an appropriate meaning in any of the lexical sources, unless one were to go as far afield as to Kanjobal. Yucatec has a verb of that form, but its meaning is not appropriate.

Glyphic alternations of three varieties have been exemplified in the above review:

- (1) There are those premised on homophony, the phonetic equivalence of two or more signs, which allows them to be substituted one for another in any context. These are typically, though not necessarily, simple signs employed as components of compound hieroglyphs. They yield different hieroglyphs whose readings are the same.
- (2) There are those premised on synonymy, the semantic equivalence of the linguistic expressions represented by two or more signs, which allows their substitution one for another in many contexts. These are typically, but not necessarily, compound hieroglyphs which are constituents of larger phrases. They yield glyphic expressions whose readings are different, but whose senses are similar and whose reference in a given context is the same.
- (3) There are those that represent contrasting components in linguistic expressions that in other respects are the same. Examples encountered above (e.g., the alternations between T23 and T24, *na* and *ne*, in certain contexts) may represent differences in grammatical form of a given lexical item. These are not substitutions of a variety that may take place in any context; rather, they are limited in their positions of occurrence.

In principle, the distributions of two glyphic units subject to alternation under either of the first two conditions could be identical, while those of glyphic units subject to alternation due to the third can never be. In practice, however, for obvious reasons, the ideal situation is not found. Nevertheless, the distributions of alternating glyphic units furnish a criterion for distinguishing the basis of their alternation—for example, the replacements of T23 by T24 are shown by this criterion to be of a different sort than are the replacements of T23 by T537 or T1000a/b.

The substitution class of these last-named signs (T23, T537, T1000a/b) contains one other member, which has not been introduced in this review. It is the affix T4. I was first made aware of this by Peter Mathews. He and Linda Schele and John Justeson have contributed examples from inscriptions, and Stephen Houston has shown me examples from ceramic texts, of the alternation of T4 with the others of this class. A review of these must be postponed for another occasion.

Ten Phonetic Syllables

David Stuart

The methodology followed by Stuart in Ten Phonetic Syllables may be summarized as follows. First, the syllabic values of distinct signs are established by observing compounds as they combine with signs of known logographic or syllabic value. Second, syllables in final position are used to indicate possible consonantal values, while those in initial or middle position help determine the value of consonants and vowels. Another step involves the demonstration of patterns of substitution between homophones, when present, as well as the recognition of the full range of graphic variation within relevant signs. Support for proposed phonetic values comes from their "productivity," their potential for producing coherent readings when combined with other logograms and syllables. Readings are shown to be coherent in relation to associated iconography and accepted readings or interpretations of their companion glyphs and clauses. This procedure leads to many readings and exemplifies recent approaches to decipherment.

Another component of Stuart's method involves attention to lines of interpretation that depart from previous research. A case in point is the reading **WITS**, which called attention to the existence of place-name signs in Maya script. Later elaboration on this topic by Stuart and Houston (1994) has demonstrated the ubiquity of toponymic glyphs. We cannot comment on all of the decipherments proposed by Stuart in this paper, many of which were proposed in a tentative fashion that invited further research. However, the paper does focus attention on the spelling conventions of Maya writing and their relation to glyphic grammar. Stuart presents his position in the following statement: "morphemic units in the Mayan languages, such as verbal suffixes, are not necessarily represented in the script by individual morphemic signs, but rather by the phonetic combinations that 'spell' them" (1987b: 45), an assertion made independently by Victoria Bricker (1986b). This is a crucial point, for it means that we can no longer speak meaningfully of glyphs for the "completive aspect" or "passive," but only of signs that render such elements indirectly. Nonetheless, Houston, Stuart, and John Robertson have since proposed the existence of some morphemic signs, such as **-IL**.

Written in 1987 by David Stuart (1965–). Excerpted from Stuart 1987b, by permission. Not for further reproduction.

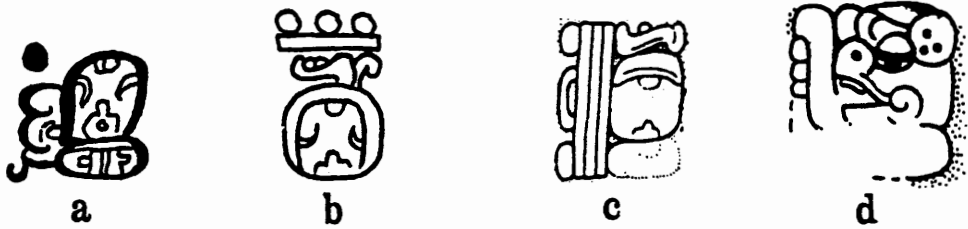


Figure 26.1. Signs T117 and T277 in various examples of the *uinal* glyph

[pp. 13–28]

wi

Both Fox and Justeson (see Justeson 1984: 334) read T277 as *wi*, and this appears to have strong supporting evidence. They also assign the value *na* to T117 (Justeson 1984: 324), as does Bricker (1986b: 6). However, I am convinced that these two signs are but stylistic variants of the same character, read *wi*.

As Fox and Justeson note, the reading *wi* for T277 is best supported by its use as a prefix to the *uinal* glyph in the codices (Figure 26.1, a)—a logograph perhaps originally read as *winik*, *winak*, and, in some cases, *winal*. The fact that T117 is the Classic-monumental equivalent of T277 is demonstrated by the similar use of T117 as a prefix to the *uinal* glyph (Figure 26.1, b–d). The contexts are identical and the two appear to be similar in form.

There is considerably more evidence for the *wi* reading in a number of texts. For example, it can be shown that T117 is often a substitute for T130 *wa* in final positions, where the vowel is optional. Figure 26.2 shows the name of a Palenque woman referred to in two inscriptions (Figure 26.2, a–b); the “*tun-over-hand*” verb for monument dedication (Figure 26.2, c–d); and, finally, the glyph for the month *Kankin*, the name for which was *Uniw* in the Southern Lowlands during the Classic Period (Fox and Justeson 1980: 212). Regarding that, Michael Closs (personal communication, 1985) notes the syllabic spelling **u-ni-w(a)** for the month on Yaxchilan Hieroglyphic Stairway 3, Step 1 Tread, at position D1a (Corpus of Maya Hieroglyphic Inscriptions 3 [Graham 1982]: 166).

Given that evidence for the reading of T117 as *wi*, I offer a test case that produces a very interesting result: At Chichén Itzá, there occurs the name of an individual which includes, as a final part, the glyph for God K (Figures 26.3, a). The God K glyph has T117 as a suffix, along with T178 *la*. The pattern of the juxtaposition of these two signs in other glyphs suggests that when *la* (T178) and *wi* (T117) are combined so that T117 is placed to the side of the glyph block, as in the present example, the *la* is to be read as the final element. Thus, at Chichén Itzá the suffixes together seem to be readable as **wi-l(a)**, making-*wil*. In another example of this same name (Figures 26.3, b), the God K glyph is not immediately apparent, but in the final position is the phonetic combination **k’a-wi-l(a)**, or *k’awil*. Still another name in the Chichén Itzá inscriptions (Figures 26.3, c–d)

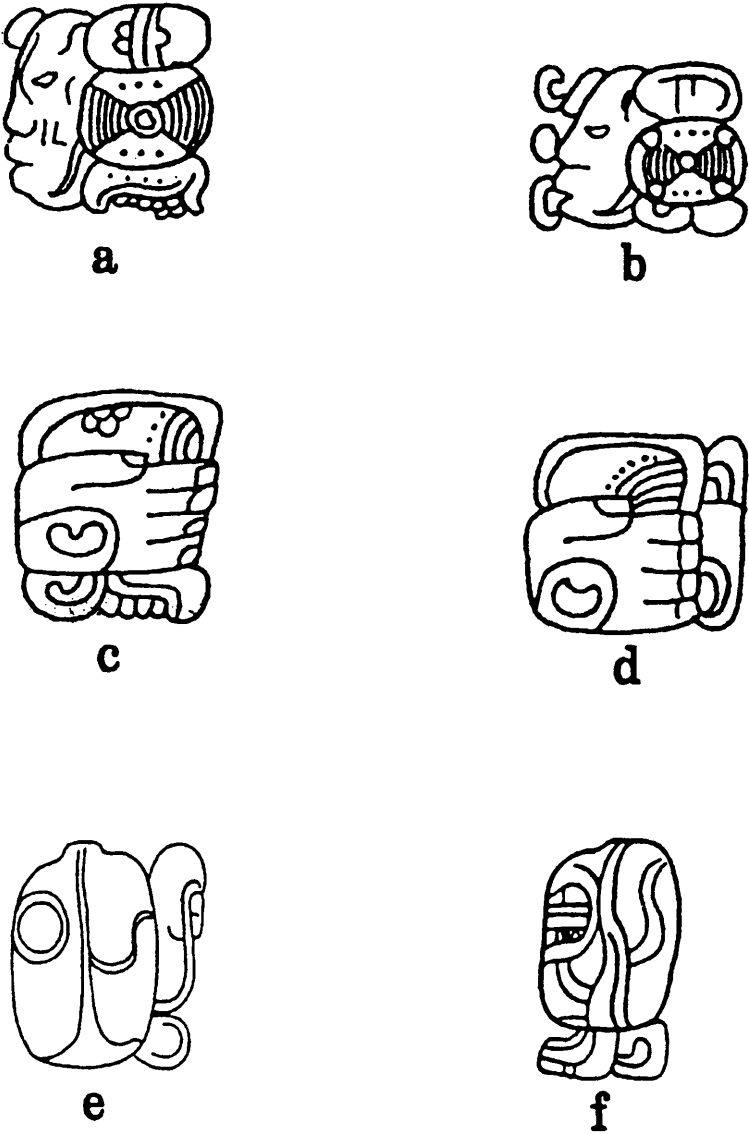


Figure 26.2. Signs T117 and T130 in three parallel examples

exhibits the same combination. I suggest that *K'awil* is the reading for the “God K-*wil*” glyph in the previous example of this name (Figure 26.3, a–b). One additional conclusion that can be drawn from this is that the God K glyph, as a logograph, is to be read *K'awil*. To support this, I point out an example from Yaxchilan (Figure 26.3, e) in which the **-wi-l(a)** combination is added to the God K head sign. Moreover, it should be noted that the glyph for God K consistently carries *la* (T24) or *li* (T82/83) as a suffix, presumably as a phonetic complement to *K'awil* (Figure 26.4).

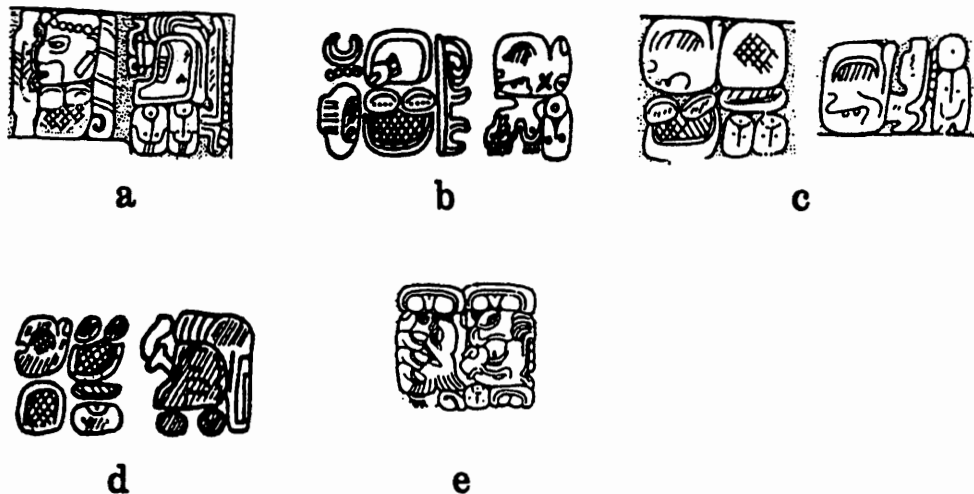


Figure 26.3. The syllable **wi** in the God K Name Glyph

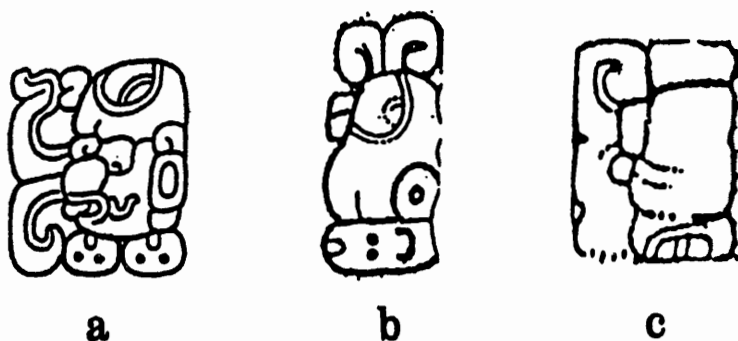


Figure 26.4. Phonetic complements attached to the name glyphs of God K

K'awil is the name of an important deity in the Colonial Yucatec sources (Thompson 1970: 289). Presumably related to *Itsamna K'awil* and the other god names that incorporate this word, he was one of the chief agricultural deities of Yucatan. Unfortunately, little of a specific nature is known of *K'awil*. The name *Amayte K'awil*, or “‘Corner Tree’ *K'awil*” (Thompson 1970: 229), suggests that he had manifestations in the four worldly corners, much like the *Bacabs* or the *Chaacs*.

In any case, it is of interest that Thompson (1970: 226) associated the name *K'awil* with God K—this because of the “emphasis on vegetation” he saw in God K, and the corresponding agricultural associations of *Itsamna K'awil*. I believe that Thompson’s identification of God K as *K'awil* is correct, and surely the best evidence lies in the spelling *k'a-wi-l(a)* in place of God K at Chichén Itzá. God K’s maize or agricultural associations during the Classic Period have been demonstrated by Taube (1989). Even with those



Figure 26.5. Itsamna in the Madrid Codex

ties—and, to be sure, most supernaturals of the Late Postclassic Period did have at least indirect ties to agriculture—the role of God K during the Classic Period appears to be consistently and intimately connected with notions of royal power and lineage.

An additional reading employing T117 as *wi* is discussed below in the section devoted to the syllable *tsi*.

tsi

So far we have seen the possible relationship of certain hieroglyphic signs to the phonetic syllables *ts'i*, *pi*, and *wi*. I would now like to propose another sign as having the value *tsi* (unglottalized). The sign is that which is sometimes known as the “spotted-” or “dotted-*Kan*,” and it is numbered 507 by Thompson (1962: 105). The reading was first indicated to me by a variant of the name of God D—accepted by most epigraphists as *Itsamna*—in the Madrid Codex (Figure 26.5). In that instance, the name of the deity, clearly God D, contains the usual component signs, except for the one in the initial position. Instead of the forehead tassels usually displayed in front of the face in the God D name glyph, this example suppresses at least the upper part of that feature, having instead the codical form of the spotted-*kan* sign. Upon seeing this example, I was struck by the possibility that the sign in question serves to indicate part of the phonetic reading of the name *Itsamna*. A value of *its* or, even better, *tsi* suggested itself as worth testing in other occurrences.

The spotted *kan* is one of three components of the “positive aspect” glyph of the codices (Figure 26.6), first identified by Zimmermann (1956: Tafel 8, A22). The first component sign is T62 *yu* or *u* (Lounsbury, personal communication, 1983), a value that has been well demonstrated. The final sign, after T507, the postulated *tsi*, is T24, probably *li* or, at times, the suffix *-il*. Taking all these readings into account leads to the transcription (y)u-**tsi-l(i)**, or *utsil*, “good”—a reading of the whole that makes

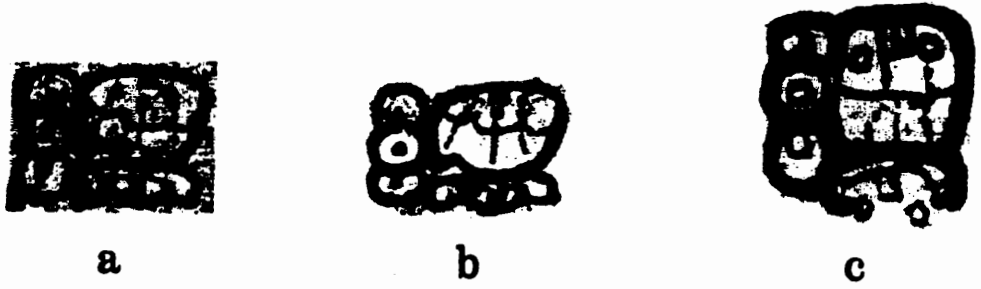


Figure 26.6. Positive aspect glyphs in the codices

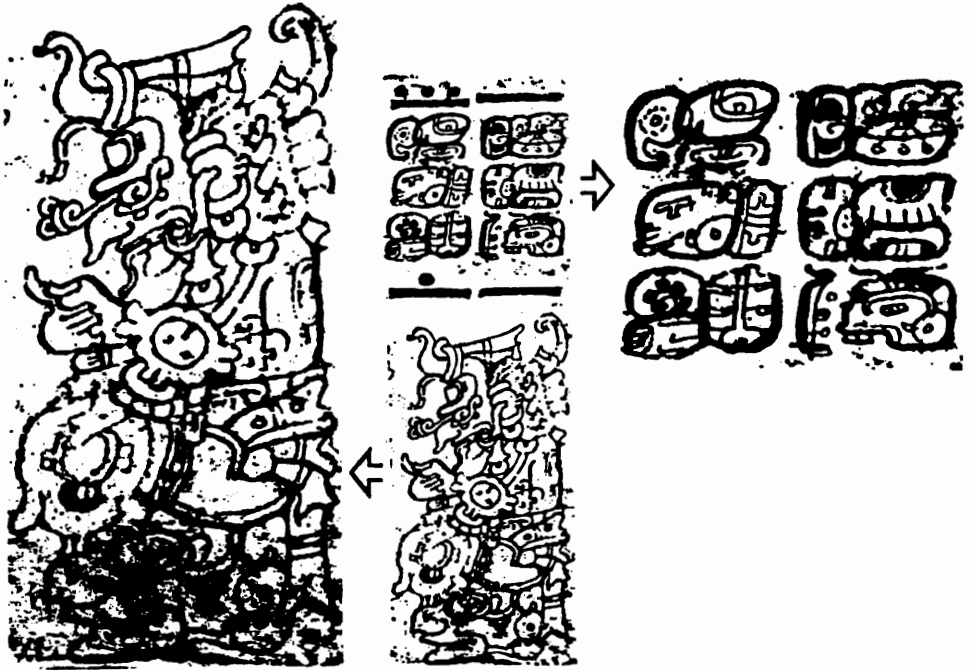


Figure 26.7. Chaac on the hill in the Dresden Codex

perfect sense in light of Zimmermann's conclusion regarding the positive aspect or augury of the glyph.

Additional support for the *tsi* reading derives from the use of the sign in a glyph that seems to spell **wi-ts(i)** or *wits*, "hill/mountain." As one might expect, this is a combination of the sign *wi*, discussed above, and the spotted *kan*. On Dresden page 66b, this **wi-ts(i)** compound occurs with a locative prepositional prefix *ti*, in which case it certainly refers to the location of *Chaac* in the scene below (Figure 26.7). The god is shown seated on a large head with *cauac* markings—a common graphic convention for depicting things made of stone. The second and third glyph blocks of this caption (Figure 26.7, a, B1, A2) might therefore be read *ti wits Chaac*, or "Chaac [is] on the hill." Parenthetically, the glyph

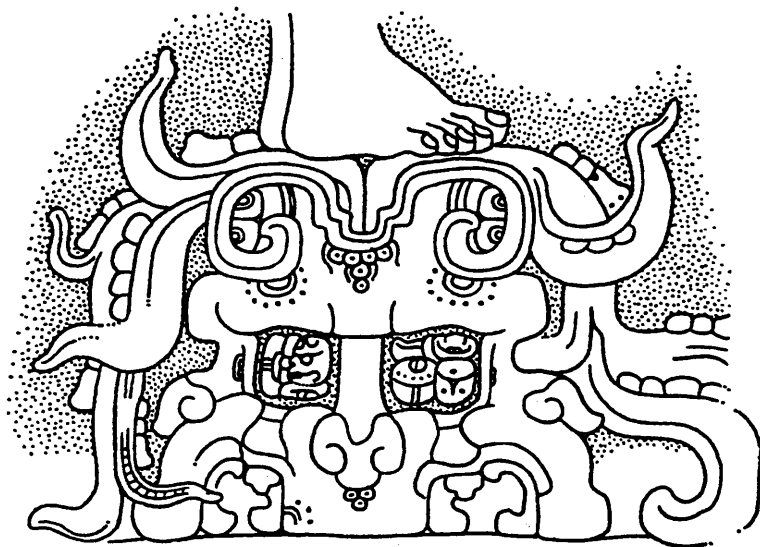


Figure 26.8. The countenance of the Cauac Monster at Palenque

that follows the name of *Chaac* may here be read as something like *chak ha'il* or *chak ha'al*, which, in Yucatec, means *llover mucho*, “to rain a lot.” This reading of *ha'* for the *Imix* sign, T501, is based on its frequent apparent use as a logograph for water, Yucatec *ha'*—sometimes with the phonetic complement *ha* attached (see Fox and Justeson 1984: 55). Thus, the entire caption of this scene may be translated as “*Chaac* is on the hill; [there is] great rain; [and] turkey is its offering”—this following Kelley (1976: 110) in reading the “offering” of *kutz*, “turkey” (at position A3 of the text).

The *wits* reading is applicable to a glyph on the Tablet of the Temple of the Foliated Cross at Palenque (Figure 26.8). There, the eider “Chan Bahlum” is portrayed standing upon foliage which issues from a distinctive stepped cleft in the forehead of a three-sided “*Cauac* Monster.” The eyes of the frontal face on the monster each contain a hieroglyph. Within the [observer’s] right eye is the monumental version of the **wi-ts(i)** seen in the Dresden Codex, followed by a **na-l(a)** combination which may refer to the vegetation which emerges from the top of the monster—the iconic version of the T86 sign (read by Knorozov [1967: 83, no. 066] as *nal*). I suspect that in this instance *wits* refers to the *Cauac* Monster itself, much as *wits* referred to the *cauac* head in the Dresden scene. The two glyphs in the eyes may together form the name of a specific mountain or location.¹ On a related note, the same two glyphs, or variants thereof, appear in the main text of the tablet where they would seem to be associated with the birth of GII of the Palenque Triad (Schele, personal communication, 1978).

Sign T529 (Figure 26.9) substitutes for the supposed **wi-ts(i)** combination; for this reason I would read it *wits* as well. T529 consists of a rather unusual version of the *cauac* sign that I believe to be the logograph for “mountain” in the Maya script. It is the hieroglyphic version of the elaborate *Cauac* Monster such as that at Palenque, and perhaps the Dresden *cauac* entity as well (this logographic relationship seems valid no matter what

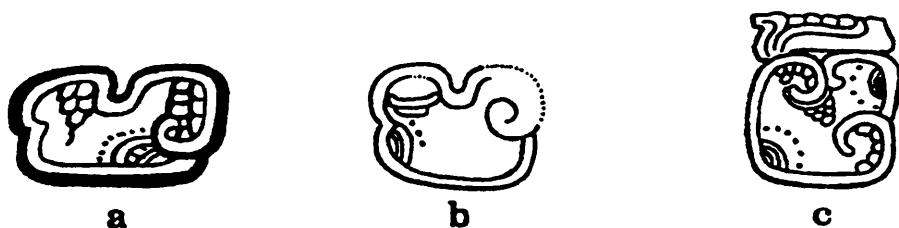
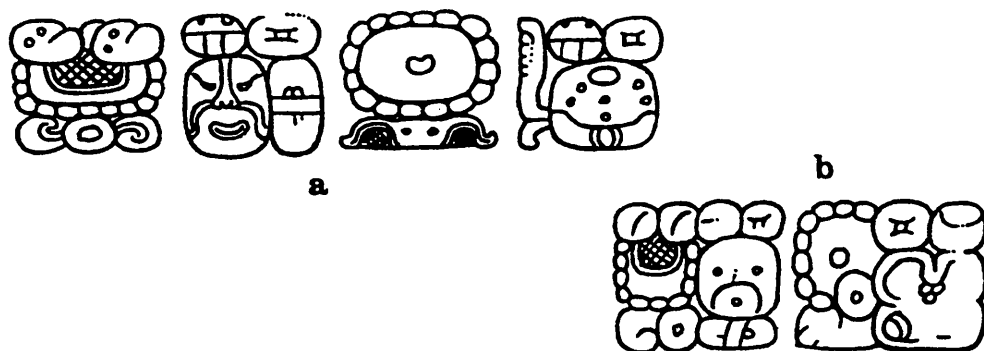


Figure 26.9. The logograph for hill or mountain

Figure 26.10. Phonetic and logographic versions of *wits*

the reading of sign T529). The equivalence can be demonstrated first in the inscriptions of Copan, where the **wi-ts(i)** combination is particularly common (Figures 26.10).

At Yaxchilan and Piedras Negras, an Emblem Glyph, previously unrecognized, accompanies the names of captives, dignitaries, and one royal consort, and it clearly exhibits this logographic substitution for *wits*. The Emblem Glyph seems to refer to an unknown site, possibly located in the western area of the Peten district. It is composed of two principal elements: the day sign *Ix* (usually with its day-sign cartouche) and either the suggested phonetic **wi-ts(i)** syllabic combination (Figure 26.11, a–b), or the elaborated *cauac* logograph (Figure 26.11, c–e). Although one can not be certain that this represents one Emblem Glyph and not two, I suggest that the equivalence is highly probable, given the associations between the *wi-ts(i)* glyph and T529 discussed above. In any event, it is interesting that the logograph for “hill, mountain” might now be associated with place references. This is quite in keeping with the well-known Mesoamerican tradition of naming places after (or as) mountains, particularly evident in the Postclassic and colonial codices of Central Mexico and Oaxaca. Thus, the “*Ix-wits*” Emblem Glyph—whether or not that is its precise reading—recalls the sense of the Nahuatl place name *Ocelotepec*, “Ocelot Hill,” and the glyph that represents it in Aztec writing (Figure 26.11, f). Two other place references in the Maya inscriptions include the putative *wits* logograph. One is the Emblem Glyph of Ucanal (Figure 26.12), first identified by Mathews (n.d.). Here the sign is customarily prefixed by *k’an*, “yellow,” but often this is an infix. Another sign is the superfix *nal*, T86, which I believe is always to be read after the sign to which it is attached. In one example, T117 *wi* is a prefix to the logograph, presumably indicating its

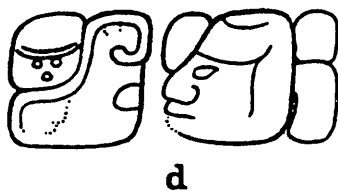
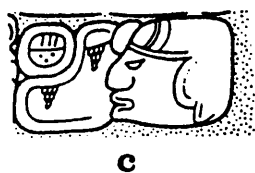
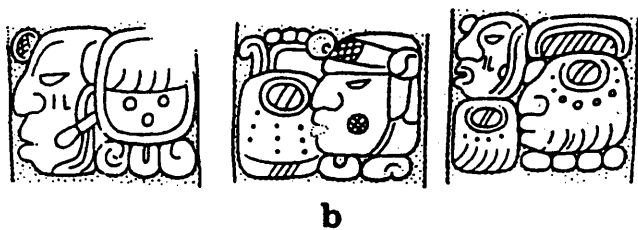
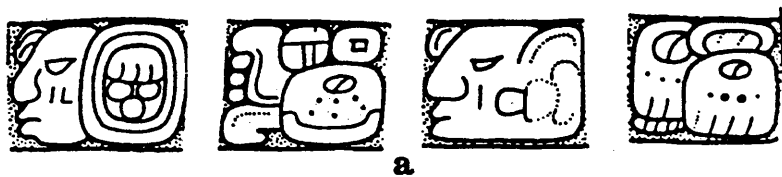


Figure 26.11. Place names incorporating *wits*

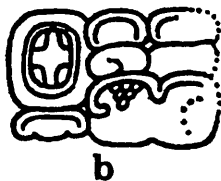
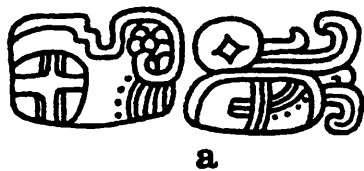


Figure 26.12. *Wits* in the Ucanal Emblem glyph



a



b



c

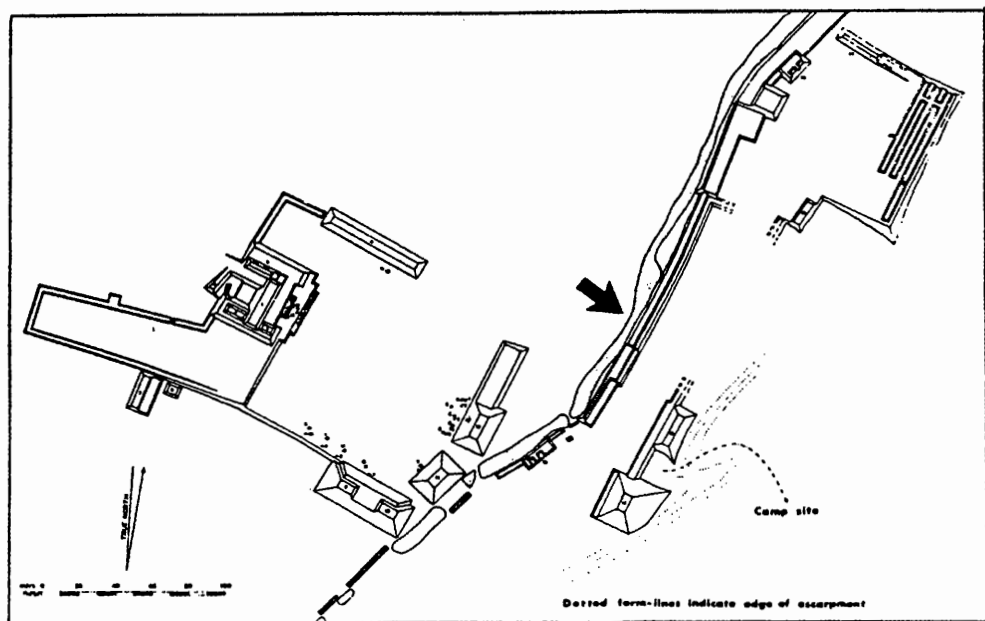


Figure 26.13. The split mountain at Aguateca

wits reading. Here, then, we have **K'AN-(wi)-WITS-NAL** as a possible transliteration of the Ucanal Emblem Glyph. Interestingly, the site of Ucanal is situated on “the south-western extremity of a spur of hills ranging up to 400 m above sea level” (Graham 1980).

Another glyph containing the *wits* logograph (Figure 26.13, a) is to be found in the texts of Aguateca, where it is prefixed by the *mak'ina* compound described by Lounsbury (1974a and b; 1985), itself equivalent to the familiar *k'inich* title. The distinctive characteristic of the *wits* glyph at Aguateca is the cleft in its top, much like that marking the *Pax* glyph and the “cleft-sky” Emblem Glyph of Yaxchilan. In one Aguateca example, just as at Ucanal, the “cleft *wits*” carries the *wi*-sign as a phonetic complement.

I believe it is significant that the “*mak'ina*-cleft *wits*” glyph occurs *only* in the inscriptions of Aguateca—a site described by Graham (1967) as having a huge fissure, or ravine, that runs across the top of the hill where the ancient buildings are situated (Figure 26.13).

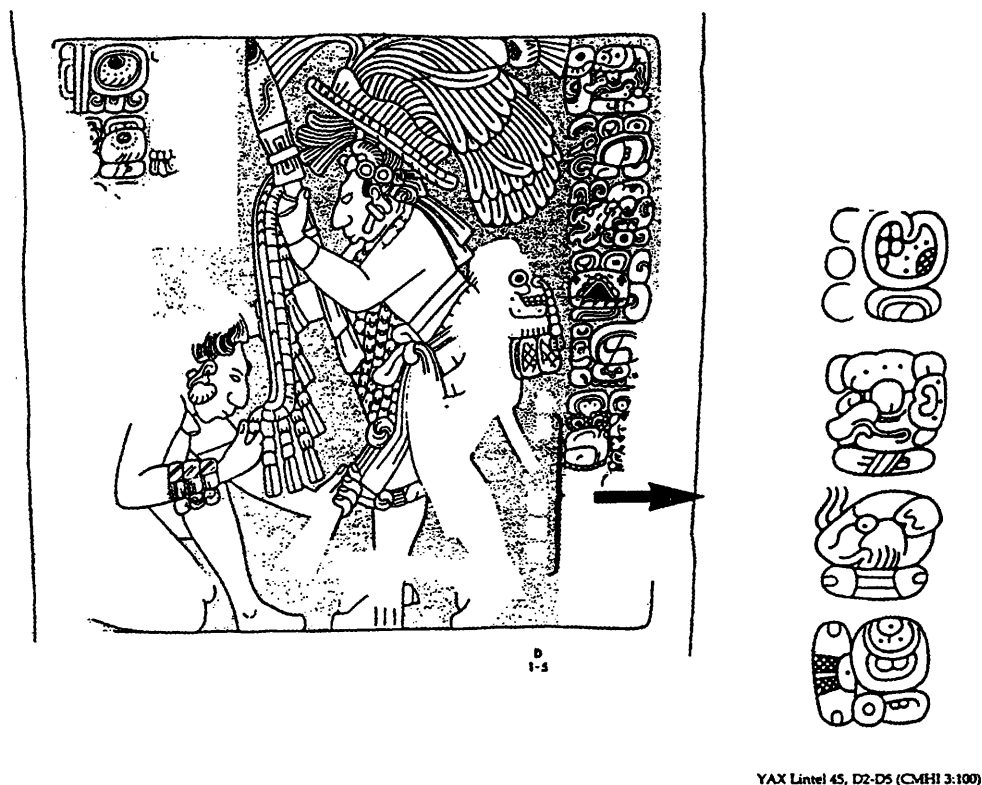


Figure 26.14. A personal name, Hun Witsil Chaak, at Yaxchilan

The fissure is up to 50 meters deep, and roughly 10 meters wide throughout its length. Aguateca thus lies upon a “split mountain,” a situation which may be reflected in the use of the split-mountain glyph at the site. The simple conclusion to draw from this is that “*k’inich-cleft wits*” was very probably the actual place name of Aguateca. Perhaps, given the phonetic complement *wi* on the Aguateca Stela 7 example of this name (Figure 26.13, c), the precise rendering was *K’inich Wits*, with the cleft forming a visual clue to the distinctive character of the mountain. A detailed presentation of such specific place names is in preparation by Stephen Houston and me.

There is one other glyphic context where the reading *wits* for the T529 logograph produces interesting results. A small incised inscription on Yaxchilan Lintel 45 exhibits a personal name (Figure 26.14) containing this sign. With the *wits* value, the reading of this name in the first two blocks is **HUN-WITS-il CHAAK-(ki)**, or “Hun Uitzil Chaac”—a name well known from the chronicles of Yucatan as that of the founder of the Xiu dynasty at Uxmal. Clearly this is not the same individual at Yaxchilan, but the parallel does indicate that this historical name was in use at Yaxchilan in the eighth century. Furthermore, the name *Hun Witsil Chaak* appears to be that of the sculptor, or one of the sculptors, of Lintel 45 (D. Stuart 1986a).



a



b



d

Figure 26.15. The glyph for playing ball in various texts

To return to the main discussion of the *tsi* syllable, the spotted-*Kan* sign is a part of a glyph (Figure 26.15, a) that is consistently associated with scenes and iconography of the Mesoamerican ball game (Figure 26.15, b–d). In this context, the spotted-*Kan*, or *tsi* syllable, always has the *pi* sign, discussed above, as a prefix. At times this combination may take a *-la* or *-li* suffix, resulting in **pi-ts(i)**, or *pits*. In the Pérez dictionary of Yucatec (1866–77), *pits* is glossed as *jugar a la pelota*, “to play ball.” The phonetic spelling in the glyph, therefore, fits perfectly the general context of its use. I think this is not only good support for the *tsi* reading of the spotted-*Kan*, but also helps to reinforce the *pi* reading proposed earlier.

NOTE

1. Karl Taube and Bruce Love (personal communication, 1987) read the glyph in the [observer’s right] eye of the Cauac monster on the Tablet of the Temple of the Foliated Cross as **wits nal**, “corn mountain,” and see the emerging foliage as that of the corn plant. I agree with both points.

Part Four

Time

Chronological statements occupy a significant portion of most Maya texts, a fact well established by researchers in the late nineteenth century. Far more recent is the understanding that many dates of the Classic period exist to frame dynastic records. This emphasis on historical content has only slowly come full circle, as epigraphers acknowledge the dynastic character of many Classic texts, yet also recognize the deep Maya preoccupation with divinatory and astronomical aspects of chronology—concerns very much evident among Postclassic and modern Maya (e.g., Tedlock 1992: 89–131). Our interpretations of Maya time are still very much in flux. Were Maya conceptions of time cyclical, contributing to something Clifford Geertz calls a “steady state” and “motionless present,” as he contends for Bali (Geertz 1973: 404), or to the deep fatalism detected by Grant Jones among the Itza Maya (Jones 1989: 241)? Did they have a strong linear component so as to emphasize the lineal continuity of royal families (Farriss 1987: 578)? Did both linear and cyclic conceptions coexist, with one necessarily dominating the other (Farriss 1987: 572), or is it a spurious Westernism to insist on a clear division between the two (Howe 1981: 231)? There is good reason to think that cyclicity (repetition) and linearity (irreversibility) can form an integrated whole. Nancy Farriss recognizes this possibility by likening some notions of Maya time to the looping curves of a “Slinky” toy or helix (Farriss 1987: 572).

Questions about Maya models of time are useful in the sense that they force us to consider the political and social uses of time, which can be mobilized for the purposes of “apologetics,” less for predicting the future than for rationalizing the past (Davis 1976: 18, 22).¹ But they are misleading in another way. Certainly there were commonalities of belief, but can scholars really speak of “Maya conceptions of time,” when such ideas doubtless varied considerably in time, space, and social setting? Some epigraphers are now shifting to a general perspective in which time does not, for the Maya, exist as an abstract framework, into which shamans (noninstitutional specialists) or priests (institutional specialists) plugged events and astronomical or zodiacal patterns. Rather, days manifested divine forces, and time itself could be a living, essential force (Watanabe 1983; Aveni 1989: 195). Individuals and individual sites probably manipulated time or improvised new ways of looking at it to suit local agendas.

The study of chronology and its astronomical features has a long tradition in Maya epigraphy. Comparisons with well-known calendars from other parts of Mesoamerica helped elucidate the ancient Maya calendar. The sacred 260-day round never fell completely into disuse and

is still kept by religious specialists in highland Guatemala (Goubaud Carrera 1935; Lincoln 1942). The Yucatec Maya preserved the use of Katun counts and their associated prophecies well into the Colonial period (and beyond). It is unclear whether some degree of understanding of the Katun cycles ever fell completely into oblivion. Andrés de Avendaño y Loyola was conversant with such topics by the end of the seventeenth century. A 1758 report tells us that the Yucatec Indians were eager to read the books of their ancestors, without giving further details about their ability to understand such documents (Barrera Vásquez and Rendón 1948: 12–13). Less than one hundred years later, Juan Pío Pérez was able to read ancient manuscripts and reconstruct the system with considerable success.

Thanks to meticulous work by Ernst Förstemann, J. T. Goodman, and others, the calendar was understood in its general features by the beginning of the twentieth century. Not only had these students found hieroglyphic evidence for the cycles of time described in Colonial manuscripts, but they “cracked” the Long Count system, forgotten centuries before the conquest. Yet it is regrettable that these striking triumphs, when combined with the rejection of Landa’s alphabet, gave way in the first decades of the new century to an extreme attitude: that the script dealt largely with calendrical and astronomical matters and could thus be deciphered through a purely mathematical approach. But the period was far from fruitless. Important advances were made, such as J. E. S. Thompson’s partial elucidation of the “lords of the night” cycle and the 819-day count (Thompson 1943b).²

These discoveries provided a stimulus to fieldwork, especially Morley’s indefatigable search for Initial Series texts, and assisted immeasurably in dating archaeological deposits. Abundant Long Count dates allowed archaeologists to establish an absolute chronology that formed the basis of most culture-historical reconstructions. Along with this, however, necessarily came a pressing need to confirm a correlation between the Maya and Christian calendars, a central concern since Pío Pérez first addressed the problem. Among the numerous solutions that have been proposed, two have gained widest recognition: they are designated the “Spinden” and “Goodman-Martínez-Thompson” correlations, after the names of their proponents. In this section we include some of the more important contributions to Maya calendrics and astronomy, ranging from Pío Pérez’s work to Teeple’s attempts to push beyond such matters to their social and political background. A final, much-neglected article by Berlin demonstrates his pioneering flair for synthesizing calendrical, astronomical, and historical approaches.

NOTES

1. In his study of the northern Thai calendar Davis discusses the use of the calendar for “*post hoc* explanatory devices,” deployed for the purposes of *rationalization* (justified transgression of rules), *dissociation* (limited effects of transgression), *compromise* (balancing good and bad auguries), and *inauguration* (beginning actions with token acknowledgment of augury; Davis 1976: 19–20). That is, a keen knowledge of time is not devoted so much to precise prediction as to reassurance and to complicity in arrangements of convenience. Implicit here are two intertwined perspectives on time: first, professional diviners may consider many complex matters before rendering advice (hence charges of “fakery” by early ethnographers looking for mechanistic divination; see Tedlock 1992: 170–71); second, the actual *response* of those seeking advice from shamans may follow any of the courses described by Davis. It may be that the more elaborate calendrical notations of the Classic

Maya not only emphasize certain dates and accompanying portions of text, but, in their complexity, underline the subtle nuances of time, the great variety of celestial and human events taking place, and the fact that compromises have been made. Nonetheless, as yet there is no evidence of augural notation in inscriptions, so this remains a speculative observation.

2. Both still resist full decipherment: the former somehow refers to books, paper, or headbands, the latter to the erection of effigies. Related counts pertain to the kindling of gods' fires.

“Antigua cronología yucateca”

Juan Pío Pérez

When John L. Stephens visited Yucatan in 1843, he met a remarkable man whose scholarship laid the foundations for the elucidation of the ancient Maya calendar and who also contributed immeasurably to the preservation and study of ancient Yucatec manuscripts and linguistic materials from the Colonial period. Don Juan Pío Pérez was born in 1798 in Mérida, where he attended the seminary school of San Ildefonso. Like many Yucatecs of Spanish ancestry, he spoke the Maya language from childhood. His scholarly interest in the Maya developed in the 1830s, when he worked as jefe político in the town of Peto, southeast of Mérida. While there, he took time to copy and study ancient manuscripts in the Maya language that he found in the church archives, an activity he pursued further after retiring from his post.

Stephens published Pío Pérez's essay on Yucatec chronology as an appendix to his travel account (Pío Pérez 1843). If Stephens's book proved a success, so did Pío Pérez's appendix; a revised version was published in the magazine Registro Yucateco, which attained three additional reprints during the nineteenth century (Pío Pérez 1846, 1854, 1883), along with a translation into French; this Brasseur de Bourbourg published, together with the first edition of Landa's Relación (1864).

Pío Pérez's linguistic endeavors were no less consequential. He was the first scholar to call attention to the Yucatec manuscripts known as “Books of Chilam Balam.” The “Pérez Codex” comprises several of these documents, which he copied at the town archives of Mani, whose originals are now lost (G. Stuart 1992a). His most distinguished linguistic work, however, is a great Maya-Spanish dictionary that was left unfinished at the time of his death. Thanks to the work of Bishop Crescencio Carrillo y Ancona and the noted German linguist Hermann Berendt, this dictionary was completed and published between 1866 and 1877.

The English translation of Pío Pérez's Chronology that appeared in Stephens' book is well known and easily available. Instead of reproducing it, we have chosen to translate the enlarged version that appeared in Registro Yucateco in 1846.

FIRST ARTICLE

§ 1. ORIGIN OF THE *TRIADECATÉRIDAS*

The Indians that populated this Yucatec peninsula, which, at the arrival of the Spaniards was called *Mayapan* and much before *Chacnouitan*, divided time in order to count and calculate it almost in the same way as the Toltecs, their ancestors, differing only in the different coordination of their great ages.

The triadecatérida, or period of thirteen days, a result of their first combinations, was their sacred number afterward, and they strove to use and preserve it ingeniously and constantly, referring to it all the divisions they imagined to harmonize and adjust their calendars with the solar course; so that days, years, and ages were counted by periods of thirteen parts.

It is probable that before correcting their computation, the Indians used lunations to adjust the annual course of the sun, giving each lunation twenty-six days, which is more or less the time in which the moon can be seen over the horizon in each of its revolutions. They divided this period into two triadecatéridas, which functioned as weeks, giving to the first the first thirteen days in which the new moon can be seen, until it is full; and to the second, the other thirteen in which, decreasing, the moon hid from the naked eye.

In time, and with better observations, they knew that twenty-six days or two triadecatéridas did not give a complete lunation, nor could the year be exactly adjusted by lunations; since solar revolutions do not coincide with those of the moon, except at long time spans. Being sure about this, and with better principles, they definitely composed their calendar, adjusting it to the solar course; but always preserving their triadecatéridas, not to harmonize them with the apparent course of the moon, but to use them as weeks for their chronological divisions.

§ 2. ON THE DAY AND ITS DIVISIONS

The day was called *kin*, which means "sun," and in this they resemble other nations, which count the days by suns. They divided it into two natural parts, namely, the night and the time when the star is above the horizon. In the latter they distinguished the part that precedes the birth of the sun, naming it with the words *hach hatzcab*, "early in the morning," or *malihokoc kine*, "before the sun rises," or *pot akab*, which indicates the dawn. With the word *hatzcab* they designated the time that runs from sunrise to noon; the latter they called *chunkin*, which is a contraction of *chumuc kin*, "center of the day" or "midday," although presently they designate with this words the hours that come close to midday. They called the hour in which the sun apparently descends in the diurnal arch *Tzelep kin*, that is, three in the afternoon. *Ocnakin* is the falling of the night or sunset. To signify the afternoon, they say "when sun freshens out" and they express it by saying *cu sistal kine*. Night is *akac*, its half or middle is *chumuc akab*, and to indicate a segment of day or night between the said points, they point out in the diurnal arch of the sun, the part that it has run or will run, and by night the coming out or position of a known star or planet.

The days are twenty, usually divided in groups of five, in order to understand better the rules that will be given later.

1st. <i>Quinterna</i>	2nd.	3rd.	4th.
Kan	Muluc	Gix (or hix)	Cauac
Chicchan	Oc	Men	Ajau (or ahau)
Quimi (or cimi)	Chuen	Quib (or cib)	Imix
Manik	Eb	Caban	Ik
Lamat	Been	Edznab (or esnab)	Akbal

It is necessary to note that the translation of these names is not as easy as might be considered, since the significance of some has been lost, be it because of their becoming ancient, or because the words were taken from some foreign language, or finally because, since they are not in use, and their writing is not well adjusted to their pronunciation, they have various meanings, without it being possible to discern which one they truly had.

1. *Kan*: Presently means the string made from twisted henequen.
2. *Chicchan*: If it were *chichan*, it would mean "small," but in the way it is written, no meaning is known.
3. *Quimi* or *cimi*: In this form, it is the past tense of the verb *quimil*, to die, but since it is a name, it might have a different meaning.
4. *Manik*: Its true meaning is lost, but if it is divided as *man-ik* "passing wind," what it was might be understood.
5. *Lamat*: What it means is ignored; *Lambat* is written among the names that Boturini found in Oajaca.
6. *Muluc*: Is also found among those of Chiapas; however, if it is the root of the verb *mulucbal*, it could be interpreted as gathering or accumulation.
7. *Oc*: The amount that fits into the cavity of the hand, contracted like a shell.
8. *Chuen*: Anciently, *chuenché* was used to mean "table"; there is also a tree called *zac chuenché*, or "white chuenché."
9. *Eb*: Is used for "ladder."
10. *Been*: Is also a Chiapanec name, like those mentioned before, and in the Maya language only the verb *beentah*, "to spend economically," is found.
11. *Gix* or *hix* is among those of Chiapas; the verb *hiixtah*, "to fall all the fruit of a tree," "to take all leaves off a branch," is found in present use, as well as the name *iixcay*, as was anciently written, which means "leviza" or "sandpaper," "fish skin," and the word *hihixcí*, "coarse."
12. *Men*: "artisan."
13. *Quib* or *cib*: "wax," "candle," or "copal."
14. *Caban*: Unknown meaning.

15. *Edzanb* or *esnab*: Equally unknown.
16. *Cauac*: Ditto.
17. *Ajau* or *ahau*: The king or the period of 24 years.
18. *Imix*: Unknown; only by transposing a letter, *ixim*, "maize," could be understood.
19. *Ik*: Wind, air.
20. *Akbal*: Unknown; it is also found among Chiapanec days, written *agh-ual*.

§ 3. ON THE WEEK

Nobody should think that the week of the ancient Indians resembled ours very much, that is to say, that it was the revolution of seven days designated with a particular name; because those [days] were the periodic course of thirteen numbers that were applied without distinction to the twenty days of the month, following their numerical order.

The year was composed of twenty-eight weeks and a day. On account of this remainder, the course of the years followed the same ordered progression of the thirteen numbers of the week; so that, if a year began with the first number of the week, the following year should begin precisely with the second, and so on until the close of their thirteen numbers, forming a week of years, or indiction, as will be explained hereafter.

§ 4. THE MONTH

In the Yucatec language, the month was called *u*, which also meant "moon." This corroborates the presumption that the Indians started out with the computation of lunations as a scale to fix the solar course, designating the months as moons; but in the manuscripts, the name *uinal* in singular, and *uinalob* in plural, is given to the eighteen months of the year, extending this denomination or word to the series, and to each of the particular names that designate the twenty days that compose the month. The word *uinal* seems to me derivative, and so, when it comes from *u*, "moon," in its first significance, then it indicates "lunation" or "month"; when it comes from *u*, "month," it refers to its parts or the days that form the month.

Since the names of the days are as many as those of the month, it ensued that, knowing the titular with which the year began, which the Indians called *cuch haab* (year bearer), the first day of all months that followed was known, being distinguished only in that, when counted, the number of the week in which they fell was added. Since the latter was made up of thirteen numbers, it was necessary that the month be made up of a week and seven numbers more, in order to complete the twenty days of which it was composed. So that, if the month began with the first number, it ended with the seventh number of the following week, and, in consequence, the second month began with number eight. Now, to know the numbers or parts of the week in which the months should begin, they invented a rule they called *bukxoc* or general count, which is the following:

1 <i>Jun in uaxac</i>	From 1 to 8	12 <i>Lajca in uac</i>	From 12 to 6
8 <i>Uaxac in ca</i>	From 8 to 2	6 <i>Uac ti oxlahun</i>	From 6 to 13
2 <i>Ca in bolon</i>	From 2 to 9	13 <i>Oxlahunté uuc</i>	From 13 to 7
9 <i>Bolonté ox</i>	From 9 to 3	7 <i>Uuc in hun</i>	From 7 to 1
3 <i>Oxté lahun</i>	From 3 to 10	1 <i>Jun in uaxac</i>	From 1 to 8
10 <i>Lajunté Can</i>	From 10 to 4	8 <i>Uaxac in ca</i>	From 8 to 2
4 <i>Can in buluc</i>	From 4 to 11	2 <i>Ca in bolon</i>	From 2 to 9
11 <i>Bulucté hó</i>	From 11 to 5	9 <i>Bolonté ox</i>	From 9 to 3
5 <i>Jó in lahcá</i>	From 5 to 12	3 <i>Oxté lajun</i>	From 3 to 10

The eighteen numbers 1, 8, 2, 9, 3, 10, 4, 11, 5, 12, 6, 13, 7, 1, 8, 2, 9, 3 are so many beginnings of months, arranged in such a way that, if the year begins with one of them, the other seventeen successively and precisely gave the number with which the other months of the mentioned year should begin, be it past, present, or future.

As has been said, the months are eighteen, and their names are the following:

1 <i>Pop</i> began on	July 16	10 <i>Yaax</i>	January 12
2 <i>Uo</i>	August 25 ¹	11 <i>Zac</i>	February 1
3 <i>Zip</i>	August 25	12 <i>Queh</i>	February 21
4 <i>Zodz</i>	September 14	13 <i>Mac</i>	March 13
5 <i>Zeec</i>	October 4	14 <i>Kankin</i>	April 2
6 <i>Xul</i>	October 24	15 <i>Moan</i>	April 22
7 <i>Dzeyaxkin</i>	November 13	16 <i>Pax</i>	May 12
8 <i>Mol</i>	December 3	17 <i>Kayab</i>	June 1st
9 <i>Dchen</i>	December 25 ²	18 <i>Cumkú</i>	June 21

The translation of these names will present the same problems as that of the days, that because some of them are so ancient or taken from a foreign language, their meaning is unknown, and that because others sometimes have two meanings, the true one is unknown.

- 1. *Pop*: Mat.
- 2. *Uo*: Frog.
- 3. *Zip*: There is only a tree called *Zipché*.
- 4. *Zodz* or *Zodz*: Bat.
- 5. *Zeec*: Unknown.

6. *Xul*: Ending.
7. *Dzeyaxkin* or *seyaxkin*: Unknown.
8. *Mol*: To gather, to pick up, and *mool* means animal claw.
9. *Dchen* or *chen*: Well.
10. *Yaax*: Green or blue, or from *yax*, first, meaning “springtime sun.”
11. *Zac*: White.
12. *Queh* or *Ceh*: Deer.
13. *Mac*: Lid, to close.
14. *Kankin*: “Yellow sun”; maybe because in this month, as a result of the forests burned in order to plant, the sun or its light is yellow, from the smoke in the atmosphere.
15. *Moan*: Means cloudy day, ready to drizzle at times.
16. *Pax*: Musical instrument.
17. *Kayab*: Song.
18. *Cumku*: Strong explosion, as of a distant cannon, that is heard at the start of the rainy season, probably caused by the swamps that cleave when dry, or by the explosions of lightning in distant squalls. It is also called *jum ku*, “sound or noise of God.”

§ 5. ON THE YEAR

To this day the Indians call the year *jaab* (*hab*), and in their gentile [non-Christian] times it began on the sixteenth of July. It is worthy of notice that their progenitors, having wanted to fix the beginning of the year on the day in which the sun passes through the zenith in this peninsula, on its way to Austral regions, having no astronomical instruments for their observations, other than their naked eye, erred only 48 hours in advance. This small difference certainly proves that they endeavored—if not with the highest precision, at least with the best approximation—to fix the day in which the time-regulating star goes through the culminating point in our sphere, and that they knew the use and results of the gnomon in the more tempestuous days of the rainy season.

The year consisted, as has been told, of eighteen months, and these consisted of twenty days, and since this results in only 360 days, in order to complete the 365 days that there should be, they added five more days, which they called “unnamed,” or “without name,” because they were not part of any month, and this means *xma kaba kin*. They also called them *uayab* or *uayeb jaab*;³ but this denomination has two interpretations, because the word *uayab* can derive from the name *uay*, which means “bed, cell or chamber,” presuming that the Indians believed that in these days the year rested, or that the next year came out as if from a deposit; this conjecture finds support in some manuscripts, in which it is called *u na jaab*, “mother of the year,” or *uayab dchab*, “bed or bedroom of creation.” It might also be derived from the verb *uay*, which means “to corrode with caustic juices from plants or other corrosive matters,” and in support of this meaning, some called them *u yail kin* or *u yail haab*, which translates as “the painfulness or hardship of the days or of the year,” because they believed that in these days befell sudden

deaths, and plagues, that they might be bitten by poisonous animals or devoured by beasts, fearing that if they went out to their labors in the fields they might get harmed with a stick or any other sort of mishap might occur.

For all these reasons, they devoted these days to celebrate, in a particular way, the feast of the god *Mam*, "grandfather." On the first day, they brought him and feasted him with great pomp and magnificence; on the second day, solemnity diminished; on the third, they brought him down from the altar and placed him in the middle of the temple; on the fourth, they placed him at the threshold or doorway of the temple; and on the fifth, they made the ceremony of throwing him away, and dismissing him, so that he might depart and so that the new year could begin on the following day, which was the first day of the month *Pop*, on July 16.

It has already been told that to complete the 365 days of the year, the first five days of the twenty that the month had were taken, and as a result, the following year began with the sixth; the third year with the eleventh, and the fourth with the sixteenth, coming back on the fifth year to the first day; it always turned to the days *Kan*, *Muluc*, *Hix*, and *Cauac* (for this reason, they were called "bearers of the year," or *cuch haab*), and it followed the correlative order of the week in its thirteen numbers.

§ 6. ON THE BISEXTILE

As the successive course of the thirteen days of the week originated so many years, with the four initial days alternating precisely, it is difficult to intercalate an extra day in the year to form the bisextile, without these two circumstances suffering interruption. But since the bisextile is very necessary to integrate the solar course—and the Indians knew the latter very well—there is no doubt they made the intercalation, although they have not left notice on the way of effecting it. For this reason, the method used by the Mexicans will be discussed, since their chronology is quite analogous to that of our Indians, both having the same origin.

Veytía, in chapter 1 of his ancient history of Mexico, taken, according to him, from the hieroglyphs and paintings that were preserved in his time as national annals, assures us that according to the feeling of Mexican writers, the bisextile was made in two ways. The first was by adding, at the end of the eighteenth month, a day that was signaled with the hieroglyph of the preceding day, but with a different number of the week; the other way was augmenting the intercalary days to six, and marking the last in the same way as in the first method. In both cases, the correlative numerical order of the succession of the years up to the thirteen that form the week is disturbed, because it would result that the fifth year would be marked with number 6 of the week, and not with 5, which would correspond correlatively, thus going from 4 to 6. Skipping one number every four years, the numerical coordination of thirteen years—which is invariably noticed, and of which consists the ingenious artifice of the wheels to form the indictions or weeks of years that compose the age of 52 years—would never be obtained.

To overcome this inconvenience, not considered by Veytía, it is necessary to believe that whether they intercalated the day at the end of the eighteenth month or after the

five complementary days, not only would they have to mark it with the number and hieroglyph of the preceding day, but also with another signal that would distinguish it from the same, so as to not confuse them in their citation or datum.

[Two lengthy paragraphs citing Boturini (1746) have been omitted (pp. 288–89).]

SECOND ARTICLE

§ 7. ON THE INDICTION, OR AGE OF 52 YEARS, CALLED KATUN

The name “indiction” was given to each of the four weeks of years that compose an age of 52 years, which the Indians called *katun*. Since an idea about it has been offered in previous explanations, the data revealed will be compiled here, to avoid entering into new explanations.

It has been said that the American week was composed by the course of thirteen numbers applied without distinction to the days of the month, which were twenty. It has been explained also that since the year was composed of 28 weeks and a day, this remainder caused the years to follow the correlative order of the numbers of the week up to 13; so that the first year of the indiction began with number 1 of the week, and ended in the same, the second year began with 2; and so on until finishing the 13 numbers of the week; and if the year were constituted only by 28 weeks, the first year of the indiction would have begun with number 1 of the week, and ended in 13, and in the same way the rest of the years.

It was equally said that the Indians, noticing that the eighteen months of twenty days gave only a total of 360, added five more days, which led to the twenty days of the month being divided into four sections, whose first days, namely *Kan*, *Muluc*, *Hix*, and *Cauac*, became the initial days of years, since they in turn began the years; taken in successive course, they ended in four years, coming back to begin with the first initial day. But since the week was composed of thirteen numbers, it encompassed only three revolutions of the four initial days, and one more, this being the reason why the week or indiction that began with the first *Kan* had to end in the thirteen, beginning the second in 1st *Muluc*. Each of them formed an indiction that was peculiar to them, because they named it in its first and last number, as can be seen in the following table:

1st indiction	2nd	3rd	4th
1 Kan	1 Muluc	1 Hix	1 Cauac
2 Muluc	2 Hix	2 Cauac	2 Kan
3 Hix	3 Cauac	3 Kan	3 Muluc
4 Cauac	4 Kan	4 Muluc	4 Hix
5 Kan	5 Muluc	5 Hix	5 Cauac

6 Muluc	6 Hix	6 Cauac	6 Kan
7 Hix	7 Cauac	7 Kan	7 Muluc
8 Cauac	8 Kan	8 Muluc	8 Hix
9 Kan	9 Muluc	9 Hix	9 Cauac
10 Muluc	10 Hix	10 Cauac	10 Kan
11 Hix	11 Cauac	11 Kan	11 Muluc
12 Cauac	12 Kan	12 Muluc	12 Hix
13 Kan	13 Muluc	13 Hix	13 Cauac

The four indictions or weeks of years that result from the particular revolution of the initial days from number 1 to 13, which together add up to 52 years, is what the Indians called *katun*, because at the end of this period they celebrated great feasts, and erected a monument in which they placed a stone athwart, as indicated by the word *Kat-tun*, for memory and account of the ages or *katunes* that elapsed. It should be noted that, until this period was completed, the initial days did not fall again in the same numbers. Because of this, just by citing them they knew where in the age they were, aided by the wheel or table in which they engraved them with hieroglyphs, and they used it to signal their days, lucky and unlucky, the feasts of their temples, their priestly matters, and predictions on temperatures and seasonal phenomena.

§ 8. ON THE GREAT AGES OF 312 YEARS OR AJAU KATUNES

In addition to the age of 52 years or *katun*, there was another great age, peculiar to these Indians of Yucatan, in whose epochs they signaled the events of their history. This age was composed of thirteen periods or epochs of 24 years, which together summed up to 312.

Each period or *ajau katun* was divided into two parts; the first, of 20 years, was included in the wheel or table, because of which they called them *Amaytun*, *Lamaitun*, or *Lamaité*; and the other, of four years, was meant as pedestal for the first, and they called it *Chek oc katun*, or *Lath oc katun*, which means “pedestal.” They considered these four years as intercalaries and not as existent, considering them unlucky for that reason, and like the five complementary days of the year, they also called them *u yail haab*, or “hard years.”

From the practice of considering them as nonexistent, separating them from the count of the years, the mistake was born of believing that the *ajau katunes* were composed of only 20 years, an error into which almost all who have discussed this subject in passing have fallen; and if they had counted the years that elapsed from one age to another, they would never have doubted this truth, which is confirmed by the manuscripts, which conclusively say that they were composed of 24 years, as discussed.

Nobody doubts that these periods, epochs, or ages, as the Spanish writers called them, took their name of *ajau katun* because their counting started from the day *ajau*, second in the years that began in *cauac*, signaling them with the respective number of the week in which they fell; but since these periods ended every 24 years, they could never had correlative numbers according to their arithmetic order, but with the following: 13, 11, 9, 7, 5, 3, 1, 12, 10, 8, 6, 4, 2. It is probable that it began in number 13 because of some notable event that happened there, since later they were counted from 8; and after the conquest of this peninsula was completed, an Indian writer proposed that they start to be counted thereafter from the 11 *ajau*, because the conquest took place there. Having said that the 13 *ajau katun* must have started at the second day of the year, this was precisely 12 *cauac*, twelfth of the first indiction, whose second day was thirteen; 11 *ajau katun* must have begun in 10 *cauac*; and thus in the other periods, being worthy of note that the sequel of their numbers is found only in lapses of 24 years, which further confirms that this was their period and not 20, as some believed.

Series of years running in two *ajau katunes*, beginning in 1392, in which 8 Ahau occurred, according to the manuscripts, in the year of 7 Cauac:

8 Ajau katun		6 Ajau katun	
1392	7 Cauac	1416	5 Cauac
1393	8 Kan	1417	6 Kan
1394	9 Muluc	1418	7 Muluc
1395	10 Hix	1419	8 Jix
1396	11 Cauac	1420	9 Cauac
1397	12 Kan	1421	10 Kan
1398	13 Muluc	1422	11 Muluc
1399	1 Hix	1423	12 Gix
1400	2 Cauac	1424	13 Cauac
1401	3 Kan	1425	1 Kan
1402	4 Muluc	1426	2 Muluc
1403	5 Hix	1427	3 Gix
1404	6 Cauac	1428	4 Cauac
1405	7 Kan	1429	5 Kan
1406	8 Muluc	1430	6 Muluc
1407	9 Hix	1431	7 Gix
1408	10 Cauac	1432	8 Cauac

1409	11 Kan	1433	9 Kan
1410	12 Muluc	1434	10 Muluc
1411	13 Hix	1435	11 Gix
1412	1 Cauac	1436	12 Cauac
1413	2 Kan	1437	13 Kan
1414	3 Muluc	1438	1 Muluc
1415	4 Hix	1439	2 Gix

The supporting point for accommodating the *ajau katun* with the years of the Christian era and counting the periods and centuries that have elapsed, and understanding and being able to relate the years that the Indians cite in their histories with those corresponding to that era, is the year 1392, which, according to all manuscripts—some of them supported on the testimony of D. Cosme Burgos, writer and conqueror of this peninsula, whose writings have been lost—was the year mentioned, which fell in 7 *Cauac*, and on its second day started 8 *Ajau*, and from this, as if from a tree trunk, all preceding and successive years are ordered, according to the numerical order they kept, which has been explained; and since all series found in the manuscripts accord with this, it is necessary to accept it as incontrovertible.

“At the end of each *Ajau katun* or period of 24 years,” a manuscript goes, “great feasts were celebrated in honor of the god of that age, and they erected and placed a statue of the god with letters and labels.” It should be supposed that all this was done with hieroglyphs.

The use of this age was highly important and advantageous, for when histories cited, for example, 8 *Ajau*, and after time had elapsed, the same *ajau* with different events was again cited as current, the 312 years that form the age, or *unnudz katun*, as they said, were supposed to have passed. Citations were made in several ways, either referring to the beginning, middle, or end of the epoch or citing or pointing out the years of the age that had elapsed when the event happened; but the more exact citation that could be made was indicating the *ajau katun*, the years elapsed, the number and name of the year in question, and the month, day, and week in which the event happened. The death by plague of a certain *Aj Pulá* is recounted in this way, since they tell that it happened in the sixth year of 13 *Ajau*, when the year 4 *Kan* was in the eastern side of the wheel, on the 18 of the month *Zip*, in 9 *Imix*. To solve this datum it is necessary to point out the year of the vulgar era in which occurred the 13 *Ajau* closest to the conquest, and as mentioned at the end of this tract, this was in 1488. Now, the six years that had run are counted in sequence, and are: 12 *Cauac*, in whose second day began 13 *Ajau*, in 1488; 13 *Kan* in 1489; 1 *Muluc* in 1490; 2 *Hix* in 1491; 3 *Cauac* in 1492; 4 *Kan*, which comes in 1493. Day 18 of the month *Zip* will be in the same position; the month *Zip* is the third of the year, and according to the rule that was stated when the month was discussed, its starting point should be sought. Since the year began in 4 *Kan*, its second month began in 11 *Kan*, the third in 5 *Kan*, this

being the one sought. The days that run from the first of the month until the eighteenth are the following.

Month *Zip*

1. 5 Kan	6. 10 Muluc	11. 2 Hix	16. 7 Cauac
2. 6 Chicchan	7. 11 Oc	12. 3 Men	17. 8 Ajau
3. 7 Quimi	8. 12 Chuen	13. 4 Quib	18. 9 Imix
4. 8 Manik	9. 13 Eb	14. 5 Caban	Which is the one mentioned in the citation.
5. 9 Lamat	10. 1 Ben	15. 6 Edznab	

Now, the month *Zip* begins on August 25; its eighteenth day must fall on September 11, because there are 7 days between August 25 and 31, plus 11 days of September, which gives the 18 days elapsed of the month *Zip*. This demonstrates that the Indian date was September 11, 1493, as precisely as if our modern style had been used. This date might be used to compute others.

When and where the use of this age originated is unknown, since neither the Mexicans nor the Toltecs—authors and amenders, in this America, of the chronological system for computing time—used this method at any time, nor had their authors notice of its existence. The few and incomplete manuscripts that exist in this peninsula do not tell it either. Therefore, nothing can be inquired and grasped even by guess; except that something might be told in the work written by D. Gaspar Antonio Xiu, grandson of the king of Mani, by order of the current governor; according to father Cogolludo, it existed in his time, and some claim it still exists.

[A discussion of Boturini’s (1746) and Veytía’s (1836) ideas on the existence of great cycles in Mexico and other areas has been omitted here (pp. 328–29).]

It has been said that the calendars of Chiapas and Soconusco are very similar to the Yucatec, and this is manifest when comparing the days of the month they had, according to Boturini, with those of this peninsula.

Days of the Chiapanec month		Days of the Yucatec month	
1. Votan	11. Ben	1. Kan	11. Hix
2. Ghanan	12. Hix	2. Chicchan	12. Men
3. Abaqh	13. Tziquim	3. Quimi	13. Quib
4. Tox	14. Chabin	4. Manik	14. Caban
5. Moxic	15. Chic	5. Lamat	15. Edznab
6. Lambat	16. Chinax	6. Muluc	16. Cauac

7. Muluc	17. Cahoqh	7. Oc	17. Ajau
8. Elab	18. Aqh-ual	8. Chuen	18. Imix
9. Batz	19. Mox	9. Eb	19. Ik
10. Enoh	20. Iqh	10. Ben	20. Akbal

Who fails to see that the second day of the Chiapanec month, *Ghanan*, if reduced to Yucatec writing and pronunciation (since gh is equivalent to k when pronounced) is the same as *Kanan* or *Kan*, that all mean the same thing, namely, yellow things, or that color? Isn't *Muluc* equal with *Muluc*, *Aghual* with *Akbal* or *Ak-ual*, as is sometimes said, *Igh* with *Ik*, *Lambat* the same as *Lamat*, *Ben* and *Hix* equal to *Ben* and *Hix* except for being transposed? All these data, and the fact that some Yucatec names lack a known significance, induce us to believe that both calendars had a common origin, being differentiated only through the mutation that priests made of them, because of particular events or personal opinions, and through the usage that our peninsulars sanctioned; others were left by custom, or because their significance was known, though presently forgotten.

[A commentary on Núñez de la Vega's (1702 [1988]) discussion of the Chiapanec calendar has been omitted (pp. 330–31).]

The Indians of Yucatan had still another sort of age or computation, but, since the method they followed to use it has not been found, not even an example to infer it, only an exact copy of what the manuscript says will be copied.

“There was another number, which they called *Ua katum*, which served as a key to find and hit the *katunes*, and according to the order of their movement, it falls in the second day of the *uayeb haab*, and it returns several years—*katunes*—later 13, 9, 5, 1, 10, 6, 2, 11, 7, 3, 12, 8, 4.”

This only indicates it was used to find the *katunes* or indictions, starting to count those numbers in the second intercalary or complementary day. Now, if only the course of these days is searched by the numbers that are mentioned, they will exactly occur every ten years, beginning with the third of the first indiction. Together, they add up to 130 years; but this is very vague and conjectural.

Such is the brief description of the ancient Yucatec chronology, a work that was done some time ago, which I dedicated to my friend Mr. Stephens, who printed it in his work on the ruins of Yucatan. I have divided it in two articles, to avoid making fastidious reading; and my friends, the editors of the *Registro*, will see that, while I have not had time to write something new, I have dusted it off, to see if they find it worthy of a place in their well-reputed periodical.

NOTES

1. This is obviously a printing error. It should be August 5, as appears in the version published as an appendix to Stephens's travels (Pío Pérez 1843: 436). [Editors' note]

2. This might also be a printing error. The version published in Stephens' travels indicates that *Chen* began on December 23 (Pío Pérez 1843: 436). [Editors' note]

3. *Nayeb jaab* in the original. [Editors' note]

“The Inscription on the Cross of Palenque”

Ernst Wilhelm Förstemann

A Maya screenfold book was acquired in 1739 by the Königliche Öffentliche Bibliothek (Royal Public Library) in Dresden. It first came to public attention when, in 1810, Alexander von Humboldt published five pages; later, Lord Kingsborough reproduced the codex in its entirety (1831–48). In 1880, a photomechanical edition was made by Ernst Förstemann, who by then was engaged in interpreting the manuscript, a labor that eventually produced a quantum leap in Maya studies.

Förstemann was born in Danzig in 1822. He studied Germanic languages and linguistics, graduating from the University of Halle in 1844. Afterward, he worked as a teacher and librarian in Danzig and Wernigerode, before being appointed as head librarian of the Dresden library, a post he held between 1865 and 1887. His services as librarian won him the honorary titles of Hofrat in 1872 and Geheimer Hofrat in 1884 (F. Riese 1991).

Aided by Landa’s and Pío Pérez’s accounts of the Maya calendar, Förstemann had elucidated the basic mechanisms of the Maya calendar by 1887. This included his demonstration of the vigesimal system of calculation, a recognition of almanacs in the codices, the discovery of the Long Count system and its 4 Ahau 8 Cumku base date, and his elucidation of the Venus tables in the Dresden Codex. Subsequently, he extended his research to the monumental inscriptions, working initially only with the drawings of F. Catherwood. He was able to apply successfully to these monuments the insights he had acquired from studies of the codices.

The article reproduced here is a good example of Förstemann’s mathematical approach to the inscriptions. In it, he disentangles the basic chronological framework of the whole inscription of the Tablet of the Cross at Palenque, although his unawareness of head-variant numerals impeded him from locating the dates within the Long Count system. His precise methodology and the crystalline quality of his thinking represented a far cry from anything written so far. Förstemann’s call for an “early successor,” made toward the end of this article, was rapidly answered; Distance Numbers, which he expounds in this article, were worked out at about the same time by J. T. Goodman (1897). The calendrical and mathematical approach Förstemann inaugurated dominated Maya epigraphy for the next seventy years.

Written by Ernst Wilhelm Förstemann (1822–1906) and originally published in *Globus* 72(3), 1897. Reprinted from the English translation published by Bowditch (1904), by permission of the Smithsonian Institution. Not for further reproduction.

It is high time for science to occupy itself with the meaning of the most famous inscription of ancient America, even though it will be a long time before a complete decipherment of this monument can be achieved.

The ruins of Palenque have been known since the middle of the last century, and as early as 1787 they were investigated and partly sketched by Antonio del Río. The inscription on the Cross, in particular, early aroused the attention of the amateur and the scientist. Since the beginning of our century it has been mentioned frequently, discussed superficially, and copied many times. Especially through the admirable drawing in J. L. Stephens's *Incidents of Travel in Central America, Chiapas, and Yucatan*, this monument has become widely known since 1841.

But the question as to the real meaning of this tablet (plate XLI) has been approached with great hesitation, although it was clear at first glance that the middle part represented a great sacrificial scene; the glyphs, about 250 in number on both sides of it, however, remained dumb.

I can call attention to but three works in which the first attempts have been made to treat the subject in a strictly scientific spirit. I refer to the three following treatises:

1. Charles Rau, *The Palenque Tablet in the United States National Museum*. Washington, 1879 (Smithsonian Contributions to Knowledge, volume 22, Washington, 1880). This work is of decided merit in the history it gives of the inscription, as well as in the designation, first introduced by Rau, of the vertical and horizontal lines by letters and numbers, which designation I have likewise adopted in the following. Rau also examines some glyphs of this tablet, but is successful only in the case of a few almost self-explanatory day signs. Concerning the main question, the meaning, he comes pretty near to the truth in his remark on page 63: "I venture to suggest that the inscription constitutes a chronologic record of some kind."
2. Cyrus Thomas, *A Study of Manuscript Troano*. Washington, 1882. This contains the special chapter, pages 198 to 208: Inscriptions on the Palenque Tablet. The author here settles, beyond dispute, the order in which the inscription is to be read (two columns at a time). With his accustomed carefulness he examines one series of characters and, although he does not accomplish his purpose, he very nearly succeeds in reading correctly the various periods occurring here.
3. Philipp J. J. Valentini, *Analysis of the Pictorial Text Inscribed on Two Palenque Tablets*; parts 1 and 2. Worcester, Mass., 1895-1896. Valentini lays stress on the decided ritual character of the inscription; at the beginning of the first column he finds the portraits of the founders of the theocracy of the country, and farther on the scattered pictures of later priests, with an account of their time and the manner of their ritual activity. He especially directs his attention to the discussion of the separate day signs and the relation between the monumental characters of the inscription and the cursive characters of the manuscripts, in the course of which he makes a number of suggestive observations. The author unfortunately adheres to the idea of reading each column separately, and so deprives himself of the possibility of finding the right way to interpret the connection.

In what follows I shall abstain from all controversy with my predecessors and leave my opinions to vindicate themselves.

Long after the following had been written, I received a treatise by Lewis W. Gunckel printed in the *American Anthropologist* for May, 1897: *The Direction in Which Maya Inscriptions Should be Read*. This memoir treats chiefly of the inscription of the Cross, but does not touch upon its meaning, merely discussing the succession of the characters, a point which I had long since settled in my own mind and which Mr. Gunckel also recognizes.

We see, therefore, that little progress has been made hitherto toward comprehending the meaning of the Cross inscription. But we are fortunately enabled by the successful interpretation of the Maya numeral system and the discovery of the meaning of several glyphs to make a considerable advance in this direction.

This progress results chiefly, however, from the observation that the inscriptions of the Maya region, excepting some short inscriptions of buildings and altars, are of two different kinds:

- (1) The so-called stelæ, which, as a rule, display glyphs in pairs of vertical rows, beginning at the top with a large number lying between one and one and a half millions, which, reckoned from the starting point of Maya chronology, denotes the present day or at least a day that is near the present.
- (2) The broader inscriptions, the framework of which consists of calendar dates, between which large numbers are interspersed that state the interval between each two dates. Between these dates and intervals there are some other glyphs, for the most part still wholly unexplained. The Cross inscription belongs to this second class.

Leaving aside the center of this tablet as not pertinent to my present task, I will now give here the six columns of glyphs on each side, containing seventeen glyphs each, to be seen on the left and right of the central sacrificial scene.

Thus we see here 201 glyphs. There would be $17 \times 12 = 204$ were not the first four places above on the left occupied by a single character, the superscription, such as is customary in inscriptions of both kinds (with some variants). In this case this superscription consists of three parts, aside from the ornaments added at the top and bottom. The character for the year of 360 days occupies the chief place; on the right and left of it are added the fins, by which the year is increased twentyfold, that is, to 7,200 days; above it we see a character never yet discussed, to which we must ascribe the meaning of $20 \times 7,200 = 144,000$ days, as will be shown farther on.

This superscription, compounded of the three largest time periods in use, accordingly means something like "chronologic guide" or "historic table."

The larger part of the two columns A and B under this superscription seems like an introduction or a guide to the remainder. It sets forth certain glyphs of special importance, necessary for the comprehension of the rest. Signs B4 and B5 are important to us as having been interpreted beyond question, for I may now assume that their meaning, 7,200 and 360 days, is fully recognized. Then follows, almost of necessity, B3 = 144,000

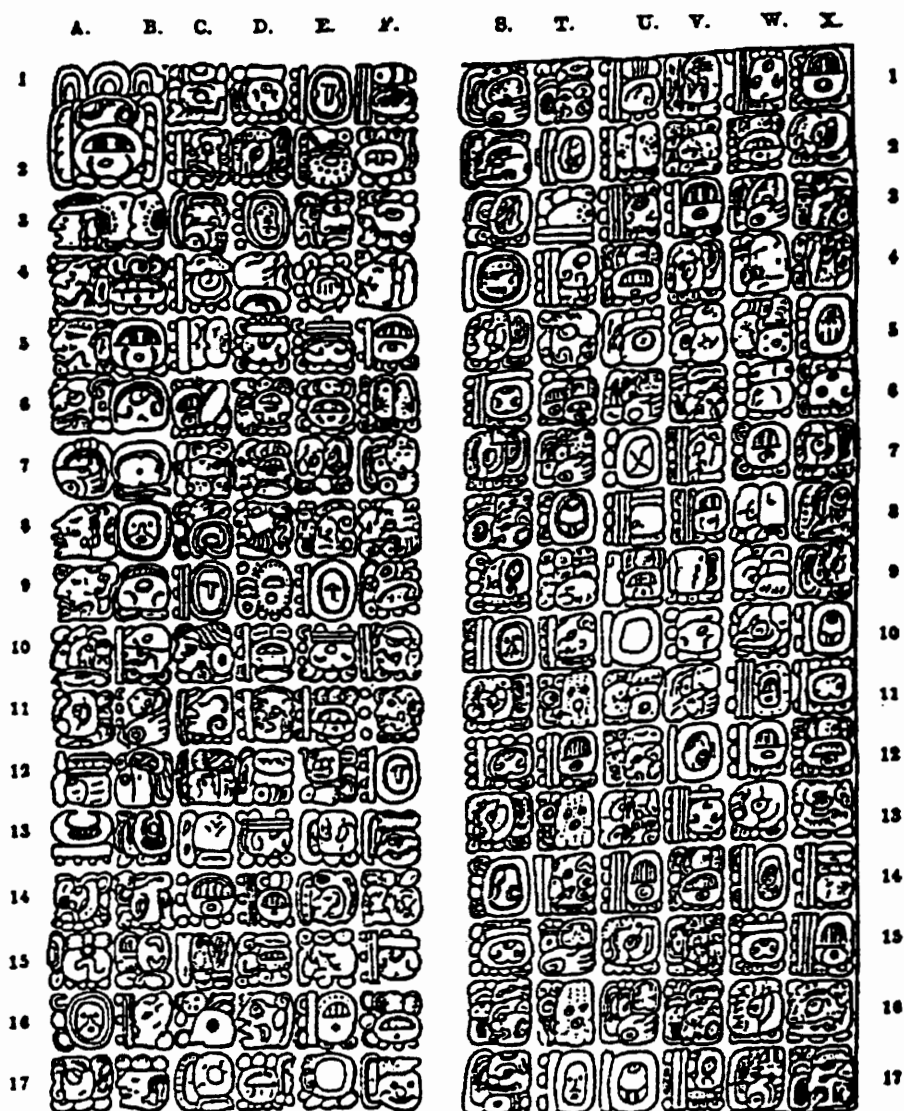


Figure 28.1. Inscription on the Tablet of the Cross, Palenque

days, as the sign of a similar form in the superscription has led us to conjecture, and as we see it repeated in C5, F6, U2, and V12.

I am equally certain that I see in B6 the sign for 20 days, although it has no resemblance to the corresponding signs in the manuscripts. This is confirmed by no fewer than sixteen succeeding passages in this inscription. The character employed here appears to be a day sign, Chuen, and such it has already been considered by others. As this day lies in the middle of a 2-day period beginning with Imix, it may, perhaps, denote the whole period.

Now, the four characters B3 to B6 are each connected with a picture, A3 to A6. These can hardly be pictures of anything but gods, who preside over such periods, although up to this point we have known nothing of these deities. In fact, in F10 instead of the sign for 360 we notice the corresponding picture, just as the same substitution occurs on other monuments; for instance, on the inscriptions in Stephens, English edition, D7 and H11 in the beginning of volume 2, the same on page 342, and the first sign on page 7.

Now, B7 is quite logically the sign *kin*, the single day. In A7 there is no longer a picture belonging to it, but a hand, probably because the single days were simply counted on the fingers. I will not attempt to explain the figure drawn above the hand. In D4 we see the same character reversed, the hand on top, the rest below.

In B8 follows Ahau, the most important of the days, and in A8 the god D (Izamna) belonging to it. This deity is recognized by the open mouth and the solitary tooth, visible in some copies of this passage.

Concerning A9 and B9 I hardly venture a conjecture. Are these signs meant to express the day 20 (Akbal) and the god B (Cukulcan)?

Thus far the characters in A are joined to those in B with no intervening space. From here on each of the two signs in the adjacent columns is independently drawn.

In B10 we notice the numeral 5. It seems as if A10 and B10 might denote the 5 unlucky days at the end of the year.

A11 I do not know how to explain; it must refer to B11. The latter, however, is composed of the numeral 2, a face looking toward the left, and a hand pointing to the right. It might be considered as suggesting the change from the old year to the new, the last day of the old and the first day of the new year, which two days are the principal subject of representation in pages 25 to 28 of the Dresden Codex.

A12 and B12 are wholly obscure to me.

In A13 we see a crescent and under it the numeral 9. Nine lunar revolutions formed a sacred period, especially as this length of time nearly corresponded with the tonalamatl. The moon sign in B13 must be closely related to A13.

In regard to the four characters, A14 to B15, I am unable to decide whether they are to be regarded as the end of this introduction or as the preliminaries of the real subject-matter of the inscription.

With A16 begins the regular alternation of dates and periods, which continues to the end of this tablet.

The points of time, or calendar dates, as I proved long ago, have the formula: I 17; 18, 17th month.

This formula designates a certain specified day recurring after a period of 52 years, that is, the first day of the 13-day week when it is the seventeenth of the 20-day period and the eighteenth of the seventeenth so-called month.¹

The time periods, on the other hand, have as the first sign that for the 20-day period, which we have already found in B6. There is a number both above and before it. The first states how many such periods are meant; the second, how many additional single days. Then follow the signs for 360, 7,200, and occasionally also for 144,000 days, provided with numbers which indicate how many such periods there are.

In accordance with this the following is the actual framework of the inscription:

	Date	Interval
1	A16-B16	D1-C2
2	D3-C4	D5-C6
3	C9-D9	D10
4	C11-D11	D13-D14
5	E1-F1	F5-F6
6	E9-F9	E10-F11
7	F12-E13	F15-F16
8	T2-S3	T3
9	S4-T4	S6-T6
10	T8-S9	T9
11	S10-T10	S12-T12
12	S14-T14	S15
13	T17-U1	U3-U4
14	U7-V7	U8-U9
15	U10-V10	V13-V14
16	U17-V17	W1-W2
17	X5-W6	X6-W7
18	X10-W11	X11-X12
19	W14-X14	W15-X15

Of the pairs of glyphs, which together express a certain date, the first (A16, D3, C9, etc.) must always designate one of the 20 days, the second (B16, C4, D9, etc.) one of the 18 so-called months. This observation will decidedly facilitate the final deciphering of this and of kindred inscriptions, although progress in this direction is checked by countless difficulties—variants, deviations of the monumental from the written text, abrasion, and disintegration. If I were to review the entire tablet in detail, the numerous queries would still give the impression of a barren waste. I can only direct attention here to a few points of special interest.

The study of the first two dates and the intervening period is already sufficiently interesting. It reminds us of the beginning of the large numbers and dates on page 24 (below on the left) of the Dresden Codex. Here we found two dates

I 17; 18, 17th month.

IV 17; 8, 18th month.

and perceived that they were separated by 2,200 ($8 \times 260 + 6 \times 20$) days. Now, we find in the Cross inscription:

A16; I, 17

B16; 18, unknown month.

D3; IV, 17

C4; 8, 18th month.

Between them, however, is D1, the sign for 20, and above it, as there was no room on the left, in all probability a 6 (the 1 for lack of room close to the 5), and in addition C2, an unknown glyph, with 8 prefixed. I think that nothing is more natural than to regard the obscure character B16 as the seventeenth month (Kayab) and C2 as a glyph for the tonalamatl. The stonecutter of the Cross inscription, therefore, proceeds from the same two dates from which the writer of the Dresden Codex proceeds, and this fact increases the probability, already appearing from other circumstances, that the Dresden Codex had its origin not far from Palenque, probably in the district of the Tzents, who, therefore, should receive closer attention from this time forward.

In spite of many difficulties the interpretation of a few of these groups can be considered correct, as the specified period agrees with a preceding and following date, inasmuch as it is the interval between them. I here give some examples in which, in order to facilitate the examination, I will state the years found by computation in which the dates are contained.

The simplest example is the twelfth date, the twelfth period, and the thirteenth date, as follows:

S14-T14: II 14; 10, 6th month. (11 Muluc.)

S15: $3 + 6 \times 20 = 123$.

T17-U1: VIII 17; 13, 12th month. (11 Muluc.)

In fact, day II 14 precedes VIII 17 by 123 days, and day 10, 6th month is 123 days before 13, 12th month. The year remains the same.

I will add that day VIII 17 in the last part of the Dresden codex is of special importance (see my second treatise, *Zur Entzifferung der Mayahandschriften*, pages 14 to 17).

The example directly preceding also corresponds admirably. It forms the eleventh and twelfth dates and the eleventh intervening period.

S10-T10: XI 5; 6, 6th month. (11 Kan.)

S12-T12: $9 + 3 \times 20 + 13 \times 360 = 4,749$.

S14-T14: II 14; 10, 6th month. (11 Muluc.)

The space between the two dates is actually $4,749 = 18 \times 260 + 69 = 13 \times 365 + 4$. And 69 is in fact the distance from XI 5 to II 14, 4 the distance from 6, 6th month to 10, 6th month.

In addition, I would mention the second and third dates and the second period:

D3-C4: IV 17; 8, 18th month. (9 Ix.)

D5-C6: $2 + 9 \times 20 + 360 = 542$.

C9-D9: XIII 19; 20, 8th month. (11 Kan.)

It should be noticed here that an affix is attached to the sign for 360, C6, which seems to me to denote the close of this period and to prevent the next sign D6 from being added to it. Moreover, D9 probably denotes the eighth month; but its prefix, according to my supposition, only denotes the close of the month.

Now, $542 = 2 \times 260 + 22 = 365 + 177$. The day IV 17, actually precedes the day XIII 19 by just 22 days. But the day 8, 18th month is distant 177 days from 20, 8th month of the following year, and therefore distant $365 + 177 = 542$ days from the same day 2 years later.

A most singular error results if the dates 17 and 18 are compared with the intervening period 17. The inscription here reads as follows:

X5-W6: II 18; 4, 12th month. (1 Cauac.)

X6-W7: $1 + 20 + 360 = 381$.

X10-W11: VII 1; 17, 8th month. (8 Muluc.)

Now, II 18 to VII 1 = 83; and 4, 12th month to 17, 8th month = 298. The sum of the two numbers is 381, which is recorded as the interval of time between them, while in reality the two dates are separated by $16,723 = 45 \times 365 + 298$ or $64 \times 260 + 83$. It is plain therefore that the characters were engraved on the stone before the computation was completed.

In one instance the month seems to be omitted. This occurs in F9, in the date which ends a period in the inscription. I here combine the starting point of the whole computation with the sixth date:

A16-B16: I 17; 18, 17th month. (3 Kan.)

E5-F6: $2 + 11 \times 20 + 7 \times 360 + 1 \times 7,200 + 2 \times 144,000 = 297,942$.

E9: IX 19; completed, 15, 4th month. (1 Muluc.)

If, since after 18,980 (52×365) days, the dates have the same position in the year, $15 \times 18,980 = 284,700$ is subtracted from 297,942, 13,242 days remain. But $13,242 = 50 \times 260 + 242 = 36 \times 365 + 102$. And the time from I 17 to IX 19 is actually 242; from 18, 17th month to 15, 4th month, 102 days; I therefore believe that it is not venturing too much thus to complete the date.

The passage F6, moreover, is the only one in the inscription where a multiple of 144,000 really follows the sign for 7,200, as would be expected. Such a multiple of 144,000, indeed, occurs three more times, but in C5 it is $8 \times 144,000$, and here it stands directly before the period beginning with the single days, while in U2 and V12 we have nine times and five times this number, but separated in each case from the succeeding

period by a glyph (V2 and U13, differing from each other). Here is a problem to be solved in the future.

An attempt, however, with the sign U2 seems to be successful. Let us compare the thirteenth with the fourteenth date:

T17-U1: VIII 17; 13, 12th month. (11 Muluc.)

U2, U3-U4: $9 \times 144,000 + 18 + 20 + 8 \times 360 + 1 \times 7,200 = 1,306,118$.

U7-V7: III 15; 16, 1st month? (2 Kan.)

That the indistinct last sign denotes the first month is, of course, only a conjecture; also that a line is lacking in the number 11 standing before it. If it is correct then everything agrees, for $1,306,118 - 68 \times 18,980 = 15,478$, but this equals $59 \times 260 + 138 = 42 \times 365 + 148$. From VIII 17 to III 15 is 138; from 13, 12th month to 16, 1st month is 148.

In another case, where I combine the fourth and fifth dates with the fourth period, I must hazard two conjectures. First, it seems to me that in D11 the actual starting point of Maya chronology, the eighth day of the eighteenth month, is not designated by the same sign as in C4, but instead by the old god (Izamna), the lord of the day 17 standing beside it; and second, I believe that the indistinct prefix of D13 is to be read as 2. These postulates being accepted, we have the following result:

C11-D11: X 17; 8, 18th month. (2 Ix.)

D13-D14: $2 + 12 \times 20 + 3 \times 360 + 18 \times 7,200 = 130,922$.

E1-F1: IX 19; 15, 12th month. (10 Muluc.)

If the number $113,880 = 6 \times 18,980$ is subtracted from 130,922, there are left 17,042 days = $65 \times 260 + 142 = 46 \times 365 + 252$, and 142 is the interval between X 17 and IX 19, while 252 is the interval between 8, 18th month and 15, 12th month.

Perhaps it is also worthy of notice here that, if 20 years (20×365) are subtracted from 17,042, 9,742 days remain, which we recognized as a recurrent and very remarkable number in the last part of the Dresden codex (see *Zur Entzifferung der Maya-handschriften*, II, pages 16 and 18).

This number, 9,742, results still more directly if the second date is combined with the fifth date just now under discussion:

D3-C4: IV 17; 8, 18th month. (9 Ix.)

E1-F1: IX 19; 15, 12th month. (10 Muluc.)

The two dates are indeed separated by $9,742 = 27 \times 365 - 113$ days, for 9,742 equals $37 \times 260 + 122 = 26 \times 365 + 252$; but there are in fact 122 days between IV 17 and IX 19, and 252 days between 8, 18th month and 15, 12th month. It is remarkable that this period of 9,742 days does not seem to be expressed anywhere on the inscription; perhaps it is denoted by a character still unknown.

These examples will suffice to point out the way along which further investigation, not merely of this but of other Maya inscriptions, must be pursued. And I have reasons for desiring an early successor in this work.

We have seen that as a rule each date is connected with the one immediately preceding it, for I could proceed from the dates 1, 2, 4, 11, 12, 13, and 17 directly to 2, 3, 5, 12, 13, 14, and 18. But I have made a jump only from 1 and 2 to 6 and 5, though I will mention also that I have jumped from 1 to 7 for my own satisfaction, apparently not incorrectly.

It appears, therefore, that a more or less direct reference to the starting points of the whole computation occurs in the three dates of columns E and F. And these days are peculiar in that they all three (E1, E9, and F12) proceed from the same day, IX 19. How may this be accounted for?

I now add an observation in which Cyrus Thomas has led the way. In nine passages of the inscription we find two unknown glyphs, the same ones each time in immediate succession: F7-E8, S1-T1, T7-S8, T15-S16, U6-V6, V11-U12, U16-V16, W3-X3, and W17-X17. Six times this pair of signs occurs between the interval and the following date; in U6-V6 it occurs between two dates, in V11-U12 between the date and the following interval, in W17-X17 at the end of the whole inscription after an interval. The characteristic of the first sign is a hand pointing forward, that of the second, a kin ("sun," "day"); accordingly, they may perhaps mean nothing more than "counting of the days." The sense must be very general, otherwise it would not occur in nine places.

NOTE

1. The last two paragraphs explain the format used by Förstemann to designate Calendar Round dates. It should be added that, like Pío Pérez, he counted the twenty day-names starting with Kan. Thus, Ahau is designated by number 17. [Editors' note]

“Maya Dates”

Joseph T. Goodman

The publication of Alfred P. Maudslay's lavishly illustrated books on the archaeological remains of the Maya (1889–1902) was a milestone in the study of Maya writing. For the first time, students had a substantial corpus of Maya sculpture easily accessible in high-quality photographic plates. To this magnum opus J. T. Goodman contributed a lengthy appendix entitled “The Archaic Maya Inscriptions,” containing a detailed explanation of the ancient Maya calendar. Although Goodman claimed to have elucidated the system by himself, there is evidence that he was aware of Förstemann's work and used it without appropriate citation (J. E. S. Thompson 1950: 30). In spite of his vainglorious claims, Goodman's work contained original glyph identifications and a series of elaborate calendrical tables that proved to be useful.

Originally from New York, Goodman moved west at a young age, becoming a newspaper owner and mining investor in Virginia City, Nevada. After these businesses had won him a sizable fortune, he moved to California, where he continued to be engaged in newspaper publishing. In his spare time he became increasingly interested in the study of Maya writing.

In the article reproduced here, Goodman communicated his opinion concerning the correlation of the Maya and Christian calendars. This basic problem had occupied the attention of many writers (see Spinden 1930b: 35–36), and several different solutions had already been advanced. While Goodman's proposal did not find immediate support, its strength was demonstrated after Juan Martínez Hernández (1926) and J. Eric S. Thompson (1935b) offered supporting evidence, albeit with slight modifications of Goodman's correlation. The correlation question was to occupy the minds of many students in the following years. Although there is still no complete agreement on the subject (see Kelley 1983), most scholars now accept a version of the Goodman-Martínez-Thompson correlation.

The more comprehensive paper I had prepared for this occasion was found to be too long. It is as well, perhaps, for the only general interest in my subject is as to just how old the Maya ruins are.

Written in 1905 by Joseph T. Goodman (1838–1917). Reprinted from *American Anthropologist* 7 (1905), by permission of the American Anthropological Association. Not for further reproduction.

Many efforts have been made to satisfy that curiosity; they can be only guess-work, however, until the ancient Maya chronology is aligned with ours. But one possible way of doing this exists: that is, by correlating the Xiu and Archaic chronological calendars. There have been several attempts in that line, but those I have seen were based on mistaken premises and therefore must of necessity be wrong.

It is not certain the thing can be done even by the use of proper data; but as our only present hope of coordinating the Archaic dates with ours lies in such a correlation, I have deemed it worth while to make one as correct as possible.

There are two chief obstacles. If we could be sure they were overcome without violence, not a particle of doubt would remain.

The first is that the katuns were computed differently in the two systems—the Archaic reckoning by a cycle of 20 katuns, the Xius by one of 13; the former numbered in the order of their succession, the latter designated by their terminal day number.

But this objection seems to vanish in face of the fact that the Archaic system, in addition to its 20-katun cycle, had a 13-katun count also—specified for some reason as “the 16-day reckoning”—in which the katuns were designated by their terminal day number, exactly as in the Yucatec plain.

I will state here, by the way, that I have found good reasons in the inscriptions for revising my chronological calendar in one particular. The signs which I thought indicated the beginning really denote the end; so that what appears in the tables as the first day of an ahau, katun, cycle, or great cycle is instead, the last day of that period. Fortunately the numbering is such that no change will be required in that respect. The notation of dates will be exactly the same as now, only it will mark the end, not the beginning, of the periods recorded. Thus the two calendars are brought into conformity in this important regard.

The second obstacle is that the annual calendars of the systems in question do not agree, there being a difference of one in the month numbers of the days. But that difficulty also seems to disappear under examination.

It is certain that Xius migrated from a region where the Archaic calendar was in use, for the style of chronological reckoning they brought with them and preserved to the last does not accord with that of any other of the Maya branches, as the Quiches or Cakchiquels.

Now, what would likely happen when a people settled in a country where a different calendar was in vogue? As they came into intercourse with the older settlers they would naturally, for the sake of convenience, adopt the current day and year count, but retain their chronological one in order to keep their records unbroken.

It is evident that precisely this happened with the Xius in their new home. Two of the chronicles state that “Pop was put in order” shortly after they came in contact with the Itzas. As mention of this fact occurs only in the chronicles of the Xius, as they did not conform their chronological count to the standard of their neighbors, and as there was no necessity for any other change, this in all likelihood refers to their adoption of the Yucatec annual calendar.

Whatever period it may have been necessary to intercalate or cancel to effect this change—whether but a day, or years—one consideration had to be kept in view: the order of their chronological count must not be disturbed.

Now, that order did not consist merely of every katun ending with a number two less than its predecessor. It involved the regular succession of seventy-three different month dates as well, any disarrangement of whose sequence would throw their chronology into confusion. Hence, supposing the change to have been made at the close of a katun ending with 13 Ahau–17 Pop (as it was), the succeeding katun must terminate with 11 Ahau–2 Pax, however much it had to be lengthened or shortened in order to do so, else the whole Xiu chronological scheme would have been thrown into disorder.

That no other change was made is certain from the facts that the Xius did not align their katun count with that of the Itzas, Cocoms, and Chels, and that its character remained unaltered and its continuity unbroken from the time they left their mother-country.

The two main obstacles being thus disposed of with a reasonable assurance of certitude, the way is cleared for the next step, which is to identify some day of the Yucatec annual calendar with the corresponding one of our era.

Luckily two dates are given by the native writers with a particularity that renders their position unmistakable.

Dr. Brinton states, in his *Maya Chronicles*, that one of the manuscripts (presumably in his possession) gives the year Montejo arrived at Chichen Itza as 11 Muluc.

Nakuk Pech's "Chronicle of Chicxulub," in the same volume, says the year the Spaniards settled in Mérida was 13 Kan.

These statements agree, which renders them reliable beyond cavil. We may be positive therefore that July 16, 1526, was the Yucatec day 11 Muluc, and July 16, 1541, 13 Kan.

The death of Napot Xiu, the *ahpula*, or priestly heir to the throne, is the event we must rely upon to fix exactly the terminal day of a Xiu katun. It is the reef on which all the chronologists have been wrecked.

The dates of other occurrences are given, but none so circumstantially as this. Besides, it was an important event in Xiu history, and would likely be carefully chronicled.

The chroniclers confused the account by attempting to give the year of our era. Like every other of our dates given by them, it is wrong. They were invariably misled by the difference between our years and their ahaus. But they all agree that the *ahpula* died on the day 9 Ymix, the 18th of the month Zip, in the year beginning with 4 Kan. As this was their own style of reckoning, there is every reason for supposing the date to be correct.

Now, 1541 being a Kan year (as the two authorities just mentioned assure us it was), it is impossible that 1536—the year in which it is said that the *ahpula* died—could have been one also. It was, in fact, the year 8 Cauac. The only 4 Kan year within a reasonable range began in 1545.

The translators have confused the account of the *ahpula*'s death still more by construing one of the sentences so as to read: "For six years the count of the 13 Ahau will not be ended," whereas it actually says: "The sixth year will not end from the count of the 13 Ahau."

This makes a great difference and gives a very definite location to the end of that katun. It could be only 13 Ahau–7 Xul, October 30, 1539. Counting by calendar years there would be five years and fifteen out of their eighteen months to 9 Ymix–18 Zip,

September 11, 1545, the day the *ahpula* died; reckoning by ahaus, as it is likely the natives computed it, but nineteen days would be lacking to complete the sixth ahau from the end of the 13 Ahau katun. No other 13 Ahau would fit the conditions in either way, while this fulfills them in both. But to fortify its position, I will cite some additional proof.

Landa states that the natives said the Spaniards arrived at Mérida during the month Pop, 1541, which was the first year of the 11 Ahau katun. This information must have come from the Xius, for the 11 Ahau katun of the Itzas, Cocoms, and Chels began December 25, 1536.

The month Pop, 1541, was really in the second ahau of the Xiu 11 Ahau katun, as we would count; but as periods were not reckoned by the Mayas until they had wholly elapsed, speaking of the date in round numbers the natives would say it corresponded to the first ahau.

It has been generally assumed, however, that this statement of Landa and that of the chronicles (that the *ahpula* died in 1536, when according to the mistranslation six years were wanting to complete the katun) are strongly corroborative, and therefore the 13 Ahau katun must have ended in 1541.

The assumption, notwithstanding its outrage of arithmetic, seems plausible in a vague sort of way; but the chronicles themselves upset it.

All the Xiu chronicles say Landa died in the 7 Ahau katun. By a chronological count based on the 13 Ahau katun ending October 30, 1539, the 7 Ahau katun would begin April 14, 1579, the very year and month in which Landa died; therefore any date more than seventeen days later than October 30, 1539, for the ending of the 13 Ahau katun would bring Landa's death into the 9 Ahau katun.

Thus the assurance given us by the annual calendar is made doubly sure, and we may rest certain that the 13 Ahau-7 Xul which fell on October 30, 1539, was the end of a 13 Ahau katun in the Xiu chronological count.

We now turn to the Archaic calendar for a katun ending with 13 Ahau-8 Xul, remembering we are supposed to have overcome the difference of a day. We must also keep in mind that owing to my rearrangement of the calendar it will be a date now at the head of a column.

Happily, in support of the correctness of the Xiu chronology, we find it in a very reasonable position—the 16th katun of the 11th cycle of the 54th great cycle.

Assuming that date to have been October 30, 1539 (as the foregoing considerations show there is just reason for doing), we are enabled to align every other date in the Archaic scheme and to fix at least the prosperous period of all the ruined cities.

The result shows that Copan, Quirigua, Tikal, Menche, Piedras Negras, and the other more modern capitals, flourished from the sixth to the ninth century of our era, speaking in round terms, and that Palenque was in existence 3,243 years before Christ.

I am aware that the older Palenquean dates are so remote that it has been commonly agreed to discredit their historical value. There is no warrant for this. They stand on exactly the same footing as the dates assumed to be historical, and all must be accepted or rejected alike.

But, apart from this general reason, there is definite proof of their historical value.

There are two kinds of initial dates in the inscriptions. One sort is merely a starting-point from which to project a computation illustrative of some peculiar style of reckoning: as that on the east face of Stela C, Quirigua, demonstrating the ways by which a great cycle can be reckoned; those on Stela C, Copan, showing a count by 4,680 years, or ninety calendar-rounds; that on the steps of Palenque, and so forth.

It will be observed that this style of dates is never followed by what I termed "the initial directive series," but which the Harvard school designates "the supplemental series." This series—which, whatever we may name it, the Mayas called "the day reckoning"—was a computation by single days to 180, originally, but later to 200; thence, respectively, to 3,600 and 4,000 days; but in both cases it led up to seventy-three 5-ahau, or 360-year, reckoning. It started from a different date in every city, and began with a different day in all of them except Copan and Quirigua.

There can be but one inference from this general diversity in a system where everything else was uniform—namely, that it was an *ab urbes conditā* reckoning, showing the relation of the regular chronological count to one from the founding of each particular city. In other words, every city, in addition to the standard chronology common to the whole race, had a reckoning from the date of its founding—like Rome. Therefore it is reasonably certain that all the initial dates which are accompanied by this supplemental series are historical.

The earliest Palenque dates are not only followed by it, but it appears there in a form so radically different and primitive as to require a vast stretch of time, considering the conservatism shown in everything else, to account for its later development in the other cities. Hence, those dates are not only historical, but they bear an unmistakable badge of relatively great antiquity.

“Archaeology”

Sylvanus Griswold Morley

The early years of the twentieth century witnessed two trends in Maya epigraphy: success in the decoding of the Maya calendar and growing rejection of Landa's alphabet as a key to phonetic decipherment. Along with these came a conception of Maya writing that dominated both popular and scholarly perceptions for many years to come. Sylvanus Morley, one of the key Mayanists of the first half of the twentieth century, initially criticized Bowditch and others for assuming that Maya inscriptions dealt primarily with chronology and astronomy; his introductory book on glyphs made several precocious suggestions about possible event glyphs in the inscriptions (Morley 1915: 33–36, 221). Yet, only two years later, in the short note reproduced here, he seems convinced that Bowditch was right.

The research project outlined in this brief note epitomized attitudes current at the time. For years, Morley crisscrossed the southern Lowlands in search of sculpted monuments, with the sole intent of cracking their chronological information and placing them securely within a temporal framework; this method would provide, he thought, a basis for the culture history of the Classic Maya. It is deplorable that little attention was paid in this monumental work to the nonchronological portions of the inscriptions. Nevertheless, Morley's chronological work provided a secure basis for all subsequent research on Maya history (Morley 1920, 1937–38).

Morley was born in Pennsylvania in 1883. He graduated as a civil engineer in 1904 and subsequently entered Harvard University to pursue his interest in Egyptology. Under the patronage of Charles P. Bowditch, Harvard's Peabody Museum was by then fully engaged in Maya research, and it was not long before Morley's attention turned to that field. He did fieldwork at Quirigua in 1911–14, at the same time becoming immersed in the study of hieroglyphs. In 1914, a research proposal by Morley initiated the long-term commitment of the Carnegie Institution of Washington to archaeological research in the Maya area. The brief announcement reproduced marked the inception of that great program. Morley's congenial personality and ability to captivate audiences played no small part in this success, and his retirement and his death in 1948 probably contributed to its demise.

Morley directed the Carnegie project at Chichen Itza between 1924 and 1937. He was relieved, however, from directing the Carnegie archaeological program in 1929, to be replaced

by Alfred Kidder, a highly respected Americanist of great breadth. Maya studies benefited from Morley's explosive and contagious enthusiasm, but he lacked the wider scientific and administrative qualifications necessary for directing a complex and geographically dispersed program. His touch at "haute" vulgarization was unmatched, however, particularly in public lectures, general articles, and his popular book *The Ancient Maya* (1946), a classic introduction to the field. His contribution to glyphic studies is more mixed, involving relatively few substantive decipherments.

After several conferences in July 1914 with the President of the Institution, Mr. Morley proceeded to Santa Fe to take up the preparation of a work containing descriptions and decipherments of all known Maya texts, which will be so arranged as to be a ready and standard book of reference on Maya chronology.

The Maya hieroglyphic inscriptions, so far as they have been deciphered, deal exclusively with the counting of time either in relation to the Maya calendar or certain astronomical phenomena with which the Mayas were familiar. Especially important are the so-called Initial Series, which fixed dates in the Maya chronological system in such a way that they could not recur, filling all the given conditions, until after a lapse of 374,400 years. During the past five years at least 50 new Initial Series have been discovered which have never been published; and when it is taken into consideration that only about 90 had been previously described, it seems probable that the investigation of the new material already in hand—as contemplated in this research—will shed much light on the whole field of Maya chronology and clear up many existing problems.

“Maya Inscriptions, VI: The Lunar Calendar and Its Relation to Maya History”

John Edgar Teeple

John Teeple, a chemical engineer who “took up the subject of Maya hieroglyphs to while away time on the long train journeys his professional work entailed” (J. E. S. Thompson 1950: 33), achieved the most significant leap forward in Maya astronomy since Ernst Förstemann had applied himself to the Dresden Codex. Teeple’s work displays a sober, meticulous quality that reflects his training as a scientist. What it lacks—perhaps to its credit, as later findings suggest—is the Mayanist erudition of Eric Thompson’s research. Teeple succinctly explained his findings in a series of short papers (1925a, 1925b, 1926, 1927a, 1927b, 1928), later summarized in “Maya Astronomy” (1930b). The first of these papers elucidates glyphs C, D, and E of the Lunar Series, which indicates the age of the moon within periods of six lunations, each alternating (with modifications) between 29 and 30 days in length and thus approximating the correct lunar month of 29.530588 days.

Later contributions by Teeple include further studies on the Lunar Series and the Venus cycle, a short-lived proposal for a correlation between the Maya and Christian calendars (1926), and the “Determinant Theory,” an ambitious explanation of non-Period Ending dates—namely, those dates recording something other than calendrical anniversaries. Teeple began with a problem. The absence of leap years in the Maya calendar meant that differences between the Maya Vague year and the actual solar year could grow rather large. Teeple reasoned that the ancient Maya solved this problem by employing “determinants,” complex numerical mechanisms used to correct such differences. Subsequent research indicates that many of these dates simply refer to events in dynastic history. The correction does not detract from Teeple’s ingenuity or the ample evidence of his clear and tidy mind. Had he been working within a different set of understandings, such as the historical or linguistic ones we now take for granted, Teeple would doubtless have gone far in interpreting Maya glyphs.

More significant still was Teeple’s observation of a “period of uniformity,” during which the cities of the southern Lowlands adopted a uniform lunar calendar, as explained in the following

Written in 1928 by John Edgar Teeple (1874–1931). Reprinted from *American Anthropologist* 30 (1928), by permission of the American Anthropological Association. Not for further reproduction.

article. This contribution is remarkable for two things: its application of astronomical data to the interpretation of Maya history and Teeple's suggestion that such uniformity might best be explained in terms of "political power and possibly conquest." This proposal bears on current discussions of Late Classic Maya history, which may have consisted, at least for several generations of rulers, of overarching spheres of political control whose power conceivably extended throughout the southern Lowlands (Martin and Grube n.d.). The large number of Lunar Series that have since come to light compel a reevaluation of this enigmatic period.

Relatively little is available on Teeple's life. Born in 1874, in Kempton, Illinois, he was soon orphaned and brought up by neighbors. The award of an A.B. from Valparaiso University (1893) was followed almost immediately by appointment as professor of chemistry and mathematics in Fremont College, in Nebraska, where he married. Further study at Cornell University led to a Ph.D. in organic and physiological chemistry (1903), after which Teeple served as, in his own words, a "habitual consultant," where his best-known work centered on the potash industry of Searles Lake, California. His obituary (Robinson 1931: 63) draws attention to his concern with solving problems and to his "addiction" to thrillers and crime mysteries, crossword and jigsaw puzzles, indulgences that probably attracted him to Maya glyphs. Teeple's clear, practical mind made him one of the most respected chemists in the United States; he served for twelve years as treasurer of the American Chemical Society.

Recent study of Maya inscriptions, particularly those containing dates and moon series attached, has given the writer an historical picture of Central America which may or may not be correct, but is at least suggestive. The territory covered extends from the Peten district on the northeast to Copan on the southeast, to Palenque on the west, and probably to the mountains on the southwest. The records start in the Peten district in the northeast about 8.14.0.0.0 (317 A.D.).¹ They had extended to Copan probably by 9.1.0.0.0 (455 A.D.) and to Palenque by 9.4.0.0.0 (514 A.D.), and during the next hundred years had appeared at most of the intermediate places with which we are familiar.

The picture we get of this region from 9.0.0.0.0 to 9.12.10.0.0 (435 A.D. to 682 A.D.) is that of a considerable number of more or less independent communities united by the use of the same calendar, the same general system of hieroglyphic writing, and similar lunar calendars. Their lunar calendars all agree at any given date, within a day or two, on the age of the moon. They may differ on whether the moon is 19 or 20 days old at a given date, but the agreement is as close as we could expect if the statement of the age of the moon is based on observation and not on a fixed calendar. At least there is no evidence of an uncorrected cumulative error. There is, however, a wide difference in their statements regarding the position of the moon in the lunar year. Whether at a given date the moon is the first or the third or the sixth moon of a lunar half year differs from city to city.

Apparently at this stage the Maya were undergoing the effort which almost all people have gone through: they once had a lunar calendar, later discovered a better approximate solar calendar, and were endeavoring by interpolation of whole moon months from time to time to keep the lunar calendar in some sort of relation to the solar calendar. This is a familiar picture in all history. The calendar was in the hands of the priests, and the priest in authority inserted the additional moons at whatever period

seemed best to him, or omitted them when he liked. So long as he dealt with the insertion or omission of whole moons, however, the days from new moon would be uniform throughout the territory, and this we find to be the case in the Maya region.

From the earliest contemporary statements of the position of the moon now available, say at 8.16.0.0.0 (356 A.D.) to the latest one 10.2.9.1.9 (878 A.D.), a period of over 500 years, we have over one hundred rather complete dates with moon series attached. Since the age of the moon is so nearly uniform throughout, never varying more than a couple of days from the calculated mean, we may assume that we are dealing with observation data and not with a formal calendar, or if it is a formal calendar it is then so frequently corrected by observations that no cumulative error can be traced. The positions of the moon in the lunar year, however, lacking this uniformity, may be traced as a symptom or trait, and by this symptom we are able to divide the whole 500–600 years of Maya occupancy into three parts, based on the treatment of the lunar year.

Period 1. Independence —From the beginning to about 9.12.10.0.0 (682 A.D.). A period of non-uniformity when each city was apparently trying to coordinate its lunar calendar to its solar calendar by interpolations in its own way, and this way was different in different cities.

Period 2. Unity —From 9.12.15.0.0 to about 9.16.5.0.0 (687 A.D. to 756 A.D.), during which the lunar calendar under the leadership possibly of Palenque was standardized into a lunar year of exactly 12 moons, and any attempt to correlate it with the solar year or the Maya year was abandoned. This standardization proceeded rather rapidly from city to city until, by 9.13.0.0.0 (692 A.D.), every city that was erecting monuments had adopted it.

Period 3. Revolt —From 9.16.5.0.0 to the latest dates (756 A.D. to 878 A.D.). At the beginning of this period Copan abandoned the standard lunar year and adopted instead a lunar year to coincide approximately with the eclipse periods, giving thus an occasional lunar year of only 11 moons, such as we find in the eclipse table of the Dresden Codex. The other cities did not immediately follow this lead (but ultimately it looks as if Naranja did). Quirigua abandoned the standard method at about the same time but did not follow the Copan method, and thereafter pursued an independent course, finally reverting to the standard method for the moon numbers but disagreeing with everything on the age of the moon. Soon after this the erection of monuments with complete dates seems to have ceased and we cannot follow the question further.

This is a rough outline of the history of one symptom, trait or idea, as I interpret it, but it may be suggestive in showing relationships that will lead to something more important than the mere status of the lunar calendar.

THE STANDARD CALENDAR

During the period of unity the practice in all Maya territory, so far as we know, was so uniform that a description of the different glyphs at that time may be of interest. (See Figs. 31.1, a and 31.2, a and c.) (Figures illustrated have been taken from Dr. Morley's drawings in the Holmes Anniversary volume.)

Glyphs G and F —I have nothing of interest to add to what has already been so clearly stated by Dr. Morley. Glyph G. seems to refer to the sun, and glyph F is always

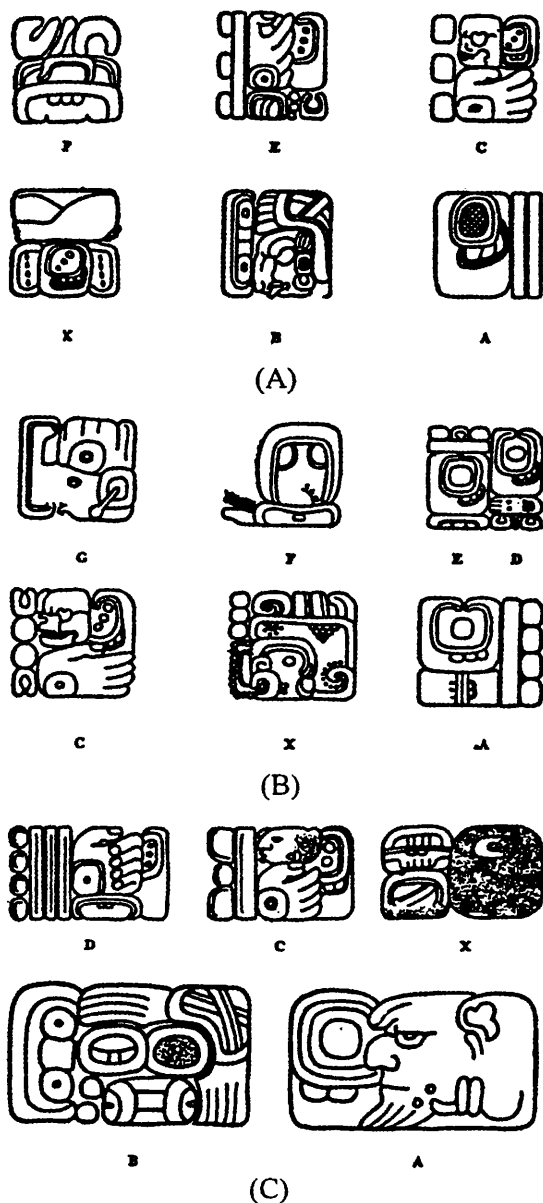


Figure 31.1. (A) Piedras Negras, Stela 1; (B) Piedras Negras, Stela 3; (C) Naranjo, Stela 29

associated with the moon series or a lunar computation. Beyond this I do not know their meaning.

Glyphs E and D —Glyph E is used when the age of the moon is 20 days or over, the coefficient of E being added to 20 to determine the number of days from new moon. Glyph D is not counted unless it has a coefficient. If it has a coefficient then glyph E

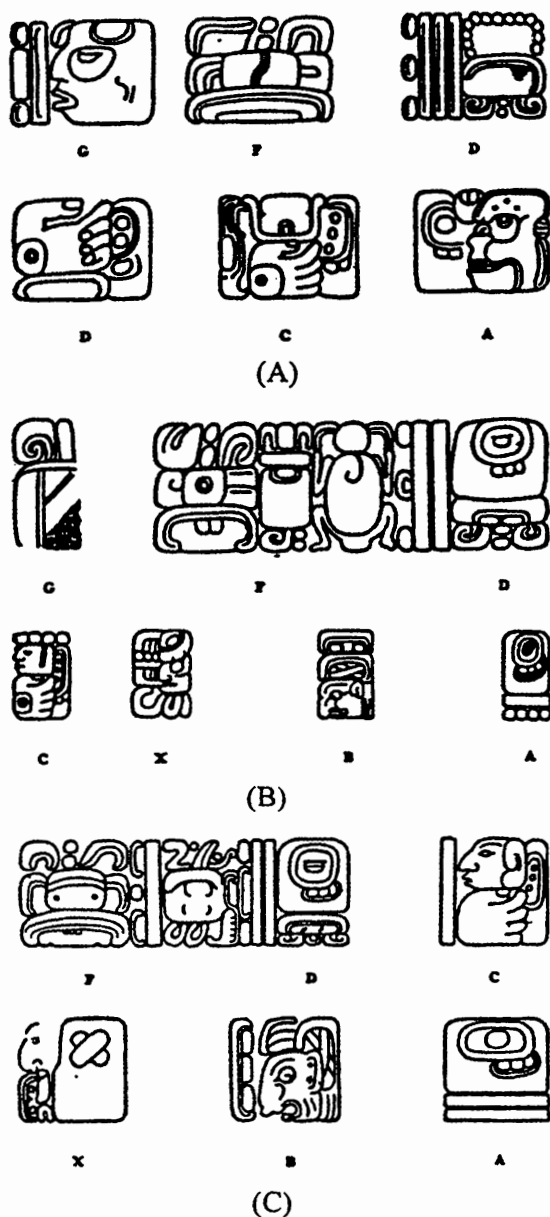


Figure 31.2. (A) Naranjo, Stela 24; (B) Yaxchilan, Stela 11—front; (C) Yaxchilan, Stela 11—side

never has one. The coefficient of glyph D represents the number of days from new moon when the days are less than 20.

There are three possible positions from which new moon might be counted. First, from the disappearance of the old moon; second, from the actual conjunction; or third, from the first appearance of new moon. During the period of the standard calendar I am

inclined to think the count was from the first appearance of new moon, or possibly from conjunction, while during the period of independence the count began earlier, probably from the disappearance of the old moon. There was apparently a one-day change at the time of the introduction of the standard calendar, and this would be just about the amount necessary to change from the disappearance of the old moon to the first appearance of the new moon. In Spanish times Bishop Landa states that "the count of the moon was from the time when it rises new," and this probably means from the appearance of new moon rather than from the conjunction some hours earlier.

It should be mentioned again that the count of D and E was essentially uniform and in relation to observation no matter whether we are in the period of independence, of unity, or of revolt.²

Glyph C —The coefficient of glyph C probably indicates the number of completed moons since the end of the last lunar half year, but we cannot overlook the possibility that it might indicate the number of the current moon. A series of faces either indicating numbers or gods form a part of glyph C, but I do not understand their significance. They may place the month in the lunar year since the numbers from 1 to 6 only place it in the lunar half year, but it seems to me more probable that they represent divinities to whom the particular moon was consecrated.

Glyph X —This glyph is the most variable of any in the series, and inspection shows that its variation is associated with the number of the moon in the moon half year, i.e., with the coefficient of glyph C, regardless of the position of the date in relation to the tun, the Maya year, or the tropical year. If the coefficient of C is changed for any given date, then X changes accordingly although the Maya date, month, and long count remain unchanged (see Figures 31.1 and 31.2).

Any given glyph for X seems to be associated with two adjacent moon numbers, as though X might give a name or a description to thirds of the lunar half year, that is, to 2 consecutive moons. For example, the glyph for God C (see glyph X in Figure 31.1, b) never occurs unless the glyph C coefficient is either 1 or 2. This form of X is present in nearly every case where the coefficient of C is 1, and in not quite half the cases where C is 2. One other form of X is found three or four times (see Figure 31.3), and this form only occurs when C is 2.

In Figure 31.1, a the glyph for X shows prominently a pair of crossed legs. This is a very common form of the X glyph but is never used unless the C coefficient is either 3 or 4. The only exception to this so far as I have found, is in lintel 29 at Yaxchilan where X is represented by crossed legs and C is apparently 5. A face with the tun sign, a 10 tun sign, or the Zero sign before it (see glyph X in Figure 31.2, b) is found when the C coefficient is either 4 or 5. The one exception to this is on stela 14 at Piedras Negras, where this combination occurs with 3C instead of 4 or 5C, but in this particular case the date given is only 3 or 4 days before 4C. In the form of glyph X shown in Figure 31.1, c the upper left-hand part of the glyph appears only in connection with 6C. This same symbol occurs on the usual face numeral for 12 and is fairly common in the inscriptions. I think it is likely the sign for the 12 moon lunar year. It is a very old glyph, as old as the Leyden plate, whose date shows the end of a moon and probably a lunar year.

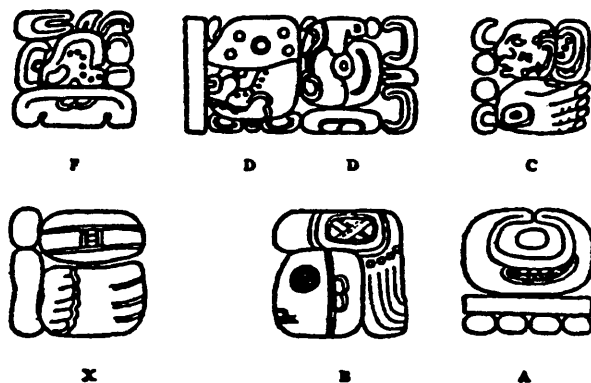


Figure 31.3. Palenque, Temple of the Cross

A few other glyphs are repeated once or twice, but the above sufficiently indicates that glyph X refers to certain divisions of the lunar half year, associated with the number of the moon in that period. We probably, however, have insufficient data to recover these divisions and reconstitute the year exactly.

Glyph B —Glyph B is very uniform in all inscriptions. It contains an ending sign prefix, an elbow with crossed bands, and within the elbow either 2 circles and an oval (Figure 31.1, c) or an animal head, possibly a jaguar (Figure 31.1, a; 31.2, c). I take glyph B to signify that the end of a moon will be a 29 or a 30 day moon as shown in glyph A immediately following it, but whether the reference is to the current moon or to the recently completed one is uncertain.

Glyph A —Glyph A with coefficient 9 indicates a 29 day moon, and with coefficient 10 indicates a 30 day moon. This has been known for a long time. This is one place where we get some indication that the lunar calendar might have been a formal one. If we examine the occurrence of 29 and 30 day moons we find more regularity than the laws of chance would lead us to expect. When glyph C is 1, 3, or 5, the number of 30 day moons is nearly 3 times the number of 29 day moons, and when glyph C is 2, 4, or 6, the number of 29 day moons is nearly 3 times the number of 30 day moons. This indicates a certain formalizing of the calendar with alternating 29 and 30 day moons, but there are a good many exceptions, more than would be necessary simply to keep a formal calendar in adjustment.

Also we find that when at Piedras Negras a date was changed from 3C to 2C (Figure 31.1, a and b) glyph A was changed from 30 to 29. At Naranjo a change of C from 6 to 1 was accompanied by a change in A from 29 to 30 (Figures 31.1, c; 31.2, a), and at Yaxchilan a change of C from 4 to 5 meant a change of A from 29 to 30 (Figure 31.2). The general tendency was evidently for an odd C to be associated with 30 days in A, and an even C with 29 days, and this indicates the possibility of a formal lunar Calendar, which however must have been corrected at very frequent intervals so that it was never more than 1 or 2 days out of adjustment with observation.

Other Glyphs —Between glyph F and glyph E there sometimes occurs a small kin sign with arms and legs. This is in most of the inscriptions at Yaxchilan (see Figures 31.2,

b–c) in the two that are known from Ixkun, in the one from Holactun, and in one from Copan. I have no idea what it means nor how to use the numerical coefficient often associated with it, nor do I understand the coefficients 5, 7, or 9 often attached to glyph G.

The above gives a summary of the standardized moon series so far as we can explain it. This form was used universally in the Maya area from 9.12.15.0.0 to 9.16.5.0.0, and in some places later. It is a uniform lunar half year of six moons with no moon interpolations and no attempt to reconcile it with the solar year, the Maya year, or the tun. It was, however, in close agreement with actual moon movements. The count of the moon age was probably from the actual appearance of new moon. The calendar was likely formal in its arrangement of 29 and 30 day moons, but if so it was corrected by the addition of a day often enough to keep it in correspondence with the actual new moon.

EVIDENCE FOR STANDARDIZATION

Our thesis is that a period of independence in numbering the moons of the lunar calendar was followed by a period of uniformity. The uniform calendar may be defined with sufficient precision as one which would write 9.16.0.0.0 as about 5C 5D, i.e., 5 days and 5 moons after the beginning of a lunar half year, all lunar half years being exactly six moons. The evidence will be of two kinds; first, a series of double dates like the three pairs, illustrated in figures 31.1–31.2, and second a list of dates from each city showing agreement after adoption of the standard, and lack of agreement before. It will be simpler to consider the cities separately. While the movement probably began at Palenque, the spread to other cities will be given first.

1. *Piedras Negras* —Standard lunar calendar adopted between 9.12.10.0.0 (682 A.D.) and 9.12.15.0.0 (687 A.D.) and used until 9.18.0.0.0 (790 A.D.). For a point of departure the date 9.12.2.0.16 (674 A.D.) was selected and its date stated in terms of the old calendar (Fig. 31.1a) as 3C 8E and of the standard calendar (Figure 31.1, b) as 2C 7E. These statements were made about 20 years after the adoption of the calendar.

Dates in Standard Lunar Calendar

		<i>Glyph C given</i>	<i>Glyph C expected</i>
Stela 6	9.12.15.0.0	4	4
" 2	9.13.5.0.0	6	6
" 4	9.13.10.0.0	–	1
" 1	9.13.15.0.0	2	2
" 3	9.14.0.0.0	3	3
" 5	9.14.5.0.0	4	4
" 7	9.14.10.0.0	5	5

" 11	9.15.0.0.0	—	1
" 9	9.15.5.0.0	2	2
" 10	9.15.10.0.0	3	3
" 40	9.15.14.9.13	4	4
Altar 2'	9.16.0.0.0	—	5
Stela 16	9.16.15.0.0	2	2
" 13	9.17.0.0.0	—	3
" 3	9.12.2.0.16	2	2
" 8	9.11.12.7.2	5	5

The last two dates of course are on monuments erected after 9.12.10.0.0.

Dates during Period of Independence

		<i>Glyph C given</i>	<i>Glyph C expected</i>
Stela 38	9.12.10.0.0	2	3
" 39	9.12.5.0.0	—	2
" 37	9.12.0.0.0	5	1
" 35	9.11.9.8.6	—	5
Lintel 2	9.11.6.2.1	5	6
Stela 1	9.12.2.0.16	3	2
" 36	9.10.6.5.9	4	5
" 31	9.10.5.0.0	3	1
" 26	9.9.15.0.0	5	5
" 25	9.8.10.6.16	3	5
" 30	9.5.0.0.0	5	5

These two lists are rather striking. There are enough dates at Piedras Negras to give a clear picture, and thanks to the courtesy of Dr. Morley I have been able to study photostats of all his drawings. During one hundred years after the adoption of the uniform calendar we have sixteen dates, and glyph C can be read in twelve of them. Without exception they are given as we should expect. During the preceding one hundred and fifty years we have eleven dates, and glyph C can be read in nine of them. Only two of the nine have the coefficient that we would compute and this is about the proportion we should expect from

chance alone. This covers all Piedras Negras dates except two late ones after 9.18.0.0.0. Hence we conclude definitely that at 9.12.10.0.0 (682 A.D.) Piedras Negras was still using her old lunar calendar and at 9.12.15.0.0 (687 A.D.) she had adopted the new one.

2. *Copan* —Standard lunar calendar adopted by 9.13.0.0.0 (692 A.D.), the computations being made on altars H' and I' and point of departure being date 9.12.8.3.9. There are 15 dates on monuments pretty surely constructed before 9.13.0.0.0 (692 A.D.) where C can be read. Only one has the C coefficient we should expect from the uniform calendar. This is 9.10.19.13.0 on stela 10, and even it may be of later construction. Then comes the date 9.13.3.7.8 on the hieroglyphic stairway, date of writing not known and reading not sure, then uniformity, as follows:

	<i>Glyph C given</i>	<i>Glyph C expected</i>
Altar H 9.12.8.3.9	5	5
Stela J 9.13.10.0.0	1	1
" 5 9.13.15.1.0	3	3
" A 9.14.19.8.0	6	6
" D 9.15.5.0.0	2	2

Entire agreement, and no more dates given until 9.16.5.0.0 when something entirely new starts at Copan.

3. *Naranjo* —Uniform lunar calendar adopted at least as early as 9.13.10.0.0 (702 A.D.) when stela 24 was erected, and probably earlier. Point of departure used 9.12.10.5.12, which is given on stela 29 (Figure 31.1, c) by their old calendar as 6C 19D, and on stela 24 (Figure 31.2, a) by the uniform calendar as 1C 18D. There are no earlier dates with moon series. Then comes stela 22, 9.12.15.13.7; if the coefficient of C here is 1 it agrees with the uniform system. Stela 23 the date is doubtful.

	<i>Glyph C given</i>	<i>Glyph C expected</i>
Stela 30 9.14.3.0.0	4	4
" 13 9.17.10.0.0	4	4
" 14 9.17.13.4.3	3	2
" 8 9.18.10.0.0	2	2

One disagreement, probably showing revolt.

4. *Yaxchilan* —Date of adoption doubtful due to absence of contemporary dated monuments. It may have been as early as 9.12.15.0.0, the same as Piedras Negras. Double dates are given on stela 11 showing 9.16.1.0.0 as 4C 12D by the old system (Figure 31.2, b) and 5C 12D by the uniform calendar (Figure 31.2, c). Also date 9.0.19.2.4 is given correctly on a late monument as 3C. During the period of independence we have only

two dates, on stela 6 and altar 44, neither in agreement with the uniform calendar. After 9.12.10.0.0 we have all in agreement. I have omitted only the date on lintel 26 which is a doubtful reading.

		<i>Glyph C given</i>	<i>Glyph C expected</i>
Lintel 21	9.0.19.2.4	3	3
" 29	9.13.17.12.10	5	5
" 98	9.15.6.13.1	5	5
" 46	9.15.14.8.14	3	3
Stela 11	9.16.1.0.0	5	5
" 1	9.16.10.0.0	1	1

5. *Quirigua* —This place was probably not founded until after the uniform calendar was in general use, so it started right, using as point of departure the date 9.14.13.4.17. Soon after 9.16.5.0.0 however, when Copan abandoned the uniform system, Quirigua abandoned it also, but not to follow the lead of Copan.

		<i>Glyph C given</i>	<i>Glyph C expected</i>
		Period of Unity	
Altar S	9.15.15.0.0	4	4
Stela H	9.16.0.0.0	5	5
" J	9.16.5.0.0	6	6
" E	9.14.13.4.17	3	3
" D	9.16.13.4.17	4	4

The last two dates are on later monuments erected after the standard system had been abandoned and purposely dated back according to the abandoned system, although the main dates on the same monuments are not.

		<i>Glyph C given</i>	<i>Glyph C expected</i>
		Period of Revolt	
Stela F	9.16.10.0.0	6	1
" D	9.16.15.0.0	1	2
" E	9.17.0.0.0	2	3
" A	9.17.5.0.0	2	3

" B	9.17.10.0.0	—	4
" G	9.17.15.0.0	5	5
" O	9.18.0.0.0	—	6
" P	9.18.5.0.0	4	1
" I	9.18.10.0.0	2	2
" K	9.18.15.0.0	3	3
Struct. I	9.19.0.0.0	4	4

The last three dates for some reason return to the expected C glyphs, but they differ entirely from all other Maya inscriptions in the statement of glyphs D and E, the moon age count.

6. *Other cities* —El Cayo was using the uniform system when the lintel having date 9.16.0.2.16 was placed. La Honradez in 9.17.0.0.0. Ixkun had probably revolted from it by 9.17.9.0.13. Tila had not begun its use in 9.12.13.0.0. Nor Tikal in 9.4.0.0.0. Chichen Itza was not using it in 10.2.9.1.9, nor Uaxactun in 10.0.0.0.0.

7. *Palenque* —The situation at Palenque is confused owing to the absence of contemporary dates with moon series. We actually have only one, 9.12.6.5.8, 5C 19D. If this reading is correct it does not agree with the uniform calendar, which calls for 6C at that date. On the other hand, the tablets at Palenque deal with long computations on the lunar year, extending thousands of years into the past, but do they favor or oppose the uniform system? In the distant past they were sure that 4 Ahau 8 Cumhu was 6C 4E, but their ideas about their present are not explicitly given in shape for us to read. If in the long computations at Palenque they used the factor 11.0.0.0 = 2682 moons or 223½ lunar years, as seems probable and as was apparently done at Copan, then computing from the ancient dates we find their contemporary dates agreed with the uniform calendar. If they used the factor 1.13.4.0 of the Dresden Codex then they were in error 1 moon. I think they used the 11.0.0.0 factor, and so were in agreement when the tablets were written in 9.13.0.0.0 or earlier.

Three indications make me think that Palenque probably originated the idea.

First, the tablet in the Temple of Inscriptions seems to indicate that 9.12.0.0.0 was 2C, which would agree with the new calendar, but the statement is vague and inconclusive.

Second, when the other cities adopted the new system they often seemed to take dates that were important at Palenque for their point of departure. Yaxchilan selected 9.0.19.2.4, 3C 7D, which is just 243 lunar years (3 to the 5th power if that means anything) from the Palenque 3 Caban 15 Mol. Quirigua selected 9.14.13.4.17, 3C 7D, just 1 moon period of 1.14.17.0 or 35½ lunar years from the same date. The first contemporary date given correctly at Copan in the uniform system 9.13.10.0.0 is just 20 lunar years from the double date used at Naranjo, 9.12.10.5.12, and the latter in turn seems to be based on the one stela cited above from Palenque.

Third, in each case of double date, besides altering the moon number to agree with the uniform calendar, the cities have also decreased the moon age by 1 day (I am not

sure whether this was done in the double date at Yaxchilan). This means to me that the uniform calendar began the month with first appearance of new moon, while the older custom had been in most cases to begin the month about a day earlier after the disappearance of the old moon. At Palenque the same thing is probably expressed by changing from 2 Cib 14 Mol to 3 Caban 15 Mol, leaving the moon age unchanged.

These three things indicate that Palenque was an early and important part of the movement, possibly as originator, possibly as one of the earliest converts, possibly as an opponent. Her history ceased so soon after 9.13.0.0.0 that she may have been a conqueror moving into new territory and leaving the old site, or she may have been an opponent vanquished or driven away.

PERIOD OF REVOLT

We have seen evidence of independence in Period 1 (up to 9.12.15.0.0), evidence of unity in Period 2 (during the next 70 to 120 years), and we now come to Period 3, the revolt. The first evidence is from Copan in the extreme southeastern corner of the territory. In 9.16.5.0.0 when all was harmony she erected stela M. Its lunar date at that time would have been written in any city in the Maya territory as 6C 4 or 5D. Copan deliberately dated it 5C 5D. Stela N in 9.16.10.0.0 by her new system was dated 1C 1D, but accidentally the standard system would have agreed on 1C also. Her third date, 9.16.12.5.17, 6 Caban 10 Mol, by the standard calendar would have been 5C and about 12D, but Copan dated it 6C and probably 12D. The altar which commemorates this event shows the famous astronomical congress in session. It was a very important occasion. In fact I consider it very probable that in these three monuments we have the origin of the method of making lunar years accord with eclipse syzygies as shown in the Dresden Codex table, but that does not concern us now.

Copan broke away from the uniform system, and five years later Quirigua on stela F (9.16.10.0.0) wrote 6C when every other city was writing 1C. Quirigua was never afterward in complete agreement with the standard calendar, except once in 9.17.15.0.0 and this was probably accidental. Indeed, in stela C she broke away entirely from the Palenque computation that 4 Ahau 8 Cumhu was 6C 4E and wrote it 3C 6E. The extreme southeast was gone. In 9.17.9.0.13 Ixkun disagrees, in 9.17.13.4.13 Naranjo does, and after 9.18.0.0.0 Piedras Negras disagrees for the first time in over one hundred years. The dates are becoming very scarce and we cannot follow them much further. After 9.18.0.0.0 I find only one single date in agreement with the standard calendar (9.18.10.0.0 at Naranjo), and this may be an accidental one. Soon afterward historical monuments here all cease. Unfortunately up to the present there is nothing available to enable us to bring Yucatan into the picture.

SUMMARY

We have indicated fairly clearly the nature of the lunar calendar and the use of most of the glyphs in the moon series, at least during the period of uniformity. We have been able by this trait to trace the Maya cities through two or three hundred

years of independence, followed by less than one hundred years of complete unity, magnificence, and artistic effort, and this in turn ended by revolt or progress, and later speedy decline or abandonment.

We have determined fairly well when this movement affected each city and for how long. At Piedras Negras it began after 9.12.10.0.0 and before 9.12.15.0.0, and was ended at least by 9.18.0.0.0. At Copan it began after altar K, 9.12.16.7.8 and before 9.13.0.0.0, and ended by 9.16.5.0.0, being then succeeded by a new movement either of revolt or progress. At Quirigua it began with the city and ended by 9.16.10.0.0, being succeeded by a movement which lasted until 9.18.0.0.0, when it in turn was succeeded by something else. At Naranjo it began surely by 9.13.10.0.0 and probably somewhat earlier, and was apparently ended by 9.17.15.0.0. At Yaxchilan it probably began as at Piedras Negras by 9.12.15.0.0, but we have no proof before 9.13.17.12.10, nor have we any evidence when it ceased, lacking legible inscriptions after 9.16.10.0.0. At Palenque it apparently began after 9.12.6.5.8 and before 9.13.0.0.0, but we know nothing of its future history there.

We do not know the nature of the unifying influence. Was it intellectual, led by astronomers, or religious under the prestige of a Pope Gregory, or political by force of arms? Only political power and possibly conquest would seem adequate to effect such complete unification in less than ten years, as well as to account for the subsequent revolt beginning at the most remote points. Up to 9.12.10.0.0 no city was using the standard lunar calendar so far as we know; by 9.13.0.0.0, less than ten years later, we can find no city that was not using it. Did the movement originate in Palenque, or were Palenque and Piedras Negras simply the first cities in the path of an impulse coming from the northwest?

What other traits can be traced in company with the calendar? What new appears at Piedras Negras in 9.12.15.0.0 that was never there before? What new impulse do we find reaching Copan by 9.13.0.0.0, and is it followed by another impulse of different nature in 9.16.5.0.0, or do we see only progress with no real break? The changes of lunar calendar shown above may furnish us a structural framework into which other variations may be fitted until the history of the people finally appears, but for the moment the chief result is to suggest a lot of questions and lines of investigation.

NOTES

1. Christian dates throughout this article are given only for ease of comparison and not as statements of fact. I have used the correlation first suggested by Goodman and later revived by Martínez and Thompson, placing 11.16.0.0.0 about November 3, 1539 Julian, not because I feel it is yet proved, but because it is the only one so far suggested which shows fair agreement with the astronomy of the inscriptions, and at the same time has some definite support in the early Spanish period.

2. The first record is 8.16.0.0.0 at Uaxactun recorded 5 E. The last entirely trustworthy one is 9.18.10.0.9 at Naranjo recorded 1 E. From these we deduce 162,004 days 5486 moons, which checks absolutely with 162,004 or 162,005 days formed from modern moon tables.

“Vericuetos mayas”

Heinrich Berlin

Of epigraphers active in the 1950s and 1960s, only Heinrich Berlin comes close to Tatiana Proskouriakoff in the rigor and brilliance of his work on monumental inscriptions. Both deserve credit for pioneering the “historical” approach to Maya decipherment, although Proskouriakoff apparently merits priority (there are indications that Proskouriakoff influenced Berlin’s paper on names at Palenque). Less widely known are the quality and importance of Berlin’s research on Colonial art and architecture (Berlin 1945, 1952). Along with his studies of Mixtec and central Mexican documents (Berlin 1947, 1948), these demonstrate the workings of a broad and supple yet exceedingly orderly mind. Even a late study such as the essay presented here, prepared after he sold his library to a Belgian institution (B. Riese 1988), has the capacity to delight and surprise with its careful textual analysis and piercing insight. With Berthold Riese (1988) we can be astonished that Berlin was able to complete a superb work of synthesis on Maya script (Berlin 1977) without ready access to library resources.

An intensely private man, Berlin was nonetheless known for his dapper dress and engaging manner. When scholars made contact with him, particularly in his later, more reclusive years when he had taken responsibility for his family’s firm in Mexico, Berlin could be affable and witty. He maintained a long and cordial correspondence with other specialists, lending support to subsequent historical work, such as Christopher Jones’ discovery of parentage statements. Late in life, he seems to have acknowledged the validity of Knorosov’s phonetic approach, but felt that this research was best left to younger epigraphers (Linda Schele, personal communication, 1992; Berlin 1984).

Berlin was born in 1915 to German-Jewish parents. His family eventually found the ambience of their homeland uncongenial, emigrating to Mexico in time to avoid the worst of Nazi atrocities. Berlin studied art history and archaeology and by 1940 was working at Palenque, where he supervised, among other things, restoration work in the tower of the Palace. His earliest papers on Maya writing (1943) dealt with calendrical topics, including the identification of a rare head variant for the number eleven. After attaining his doctoral degree with a thesis on the

Written in 1987 by Heinrich Berlin (1915–88). Translated from Berlin 1987. Berlin included several items in his bibliography but did not cite them in the text. Accordingly, we have only included entries with explicit citations and those added by the editors in crediting sources for illustrations.

sixteenth-century Mixtec Códice de Yanhuitlán (1947), Berlin lived in Guatemala between 1949 and 1953, working for the Instituto de Antropología e Historia and the University of San Carlos. He carried out research projects at Kaminaljuyu and Tikal, where he reported the Temple of the Inscriptions. In the same period, he wrote a major study of Guatemalan Colonial sculpture. Between 1953 and 1955, he conducted a survey in Tabasco for the Carnegie Institution, after which he worked with the New World Archaeological Foundation in Chiapas until 1957. Berlin was a man of firm principle and, earlier than most, decried the spoliation of Guatemala's antiquities. For most of his career he did not hold a permanent institutional affiliation and did most of his research during his spare time while managing a family business. He died in Mexico City on May 6, 1988, after a long and serious illness.

Tatiana Proskouriakoff, after studying Lintel 8 from the Maya ruins of Yaxchilan, Mexico (Figure 32.1), and relating its hieroglyphs to the image sculpted on it, noticed the following: Two people—the so-called Bird Jaguar and his assistant—each grasp prisoners, both with hieroglyphs on their thighs that appear also in the names of the captors. According to Proskouriakoff, a glyph for “capture” follows the date in the top left corner. She left open the possibility that the two captives symbolized tribes or conquered cities. There is, then, an open question left as a challenge for other investigators. In the following lines I hope to present a new approach to the problem.

Let us first examine the scene. In reality, it is not a violent one; the victims do not carry arms (these even fail to appear consistently in the famous “battle” scene in the painted murals of Bonampak, where only one of the two bands carries weapons). The man held by Bird Jaguar seems less interested in defending himself than in preserving his balance, since he is firmly supported by his right hand on the earth. Thus, the lintel does not deal with an genuine scene of war, but, we suspect, with something rather symbolic.

The lintel records the date of the event as 7 Imix 14 Tzec, which corresponds to 9.16.4.1.1 in the Long Count. Although the same date is repeated on Lintel 41 of the same site (Figure 32.2), the scene is completely different: Bird Jaguar, with the same (ritual?) attire as on Lintel 8, including the same lance, is seen standing in front of a woman. The lintel is fragmented or destroyed in its bottom part, yet it is clear that it was sculpted in one of the typical ritual scenes of Yaxchilan and involved two persons: the Halach Uinic of the place and a male of inferior rank or possibly a woman. In this instance it deals with bloodletting, as indeed seems to be indicated by the spots and dots that are found on the cape (strips of ritual paper?). These spots also appear on the helmet of Bird Jaguar and as a preponderant element on the woman's headdress.

Now let's look at the hieroglyphs. Among those found in front of the woman are three, easily recognizable 1000F heads, the ones that usually refer to women. Around Bird Jaguar are the same glyphs that appear on Lintel 8, although in greater number as if to give higher importance to the scene. The phrase begins with the same glyph mentioned before (T87:515:25.181 in Thompson's transcription system), the verbal expression for “capture,” which on Lintel 8 follows immediately after the Calendar Round (hereafter CR) of 7 Imix 14 Tzec.



Figure 32.1. Yaxchilan Lintel 8 (after *Corpus of Maya Hieroglyphics Inscriptions* 3:27)

Between the CR and T87:515:25.181 on Lintel 41 are inserted two more hieroglyphs, apparently T35.510b:575.35 and T278:527/? :669. The presence of these glyphs is in direct relation to the iconographic differences between the two lintels; possibly the glyphs have something to do with the presumed bloodletting ceremony. Does the ostentatious compound T35.510b:575.35, hereafter abbreviated LVC (Large Venus Compound), offer the key to understanding the ceremony?

The most conspicuous element in the compound is the large T510 glyph, which, because of its frequency on pages 24 and 46 to 50 in the Dresden Codex—pages dedicated to the movement of the planet Venus—has always been interpreted as the glyph identifying this “star.” Our analysis below also makes this identification plausible for the inscriptions, where the elements associated with the large Venus glyph vary from place

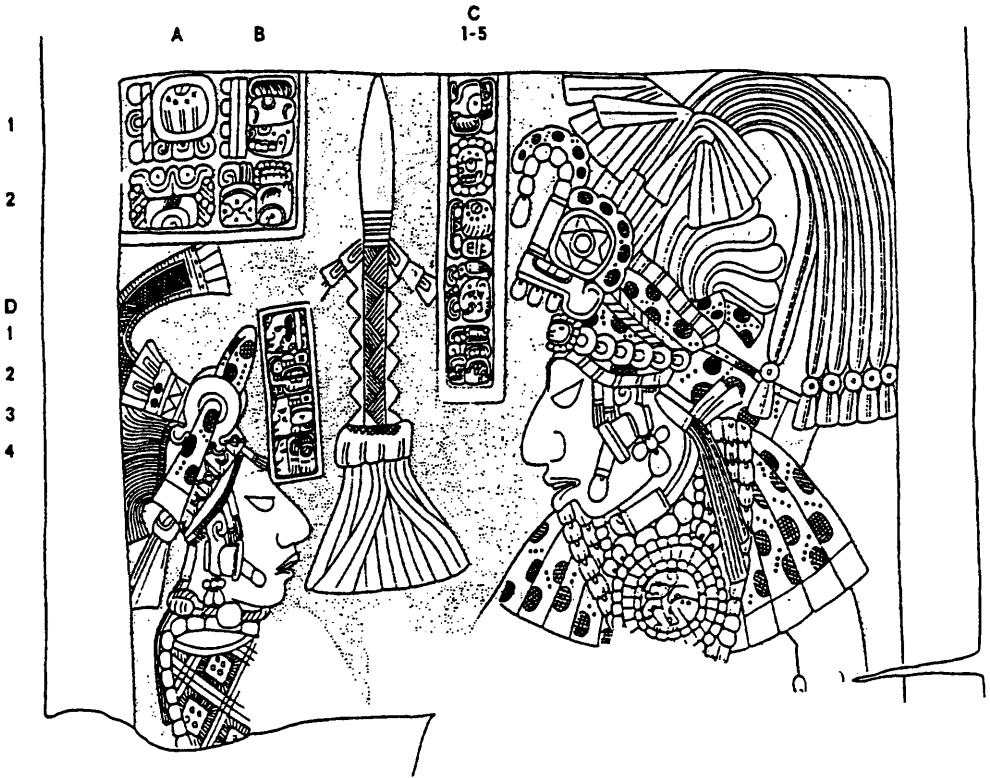


Figure 32.2. Yaxchilan Lintel 41 (after *Corpus of Maya Hieroglyphics Inscriptions* 3:91)

to place. At present some twenty examples are known. When J. Teeple published his brilliant studies of Maya astronomy over half a century ago, fewer than five were recognized, a number completely insufficient to understand their linkage between mathematics and astronomy.

Now let's review the twenty examples. Five occur in Tortuguero, a place close to Palenque. On Tortuguero Monument 6 the glyph appears first in possible association with the date 9.10.11.9.6 13 Cimi 14 Tzec, that is, in the same position of the same month as in the example from Yaxchilan. Thus we get:

$$\begin{array}{r}
 9.16.4.1.1 \quad 7 \text{ Imix } 14 \text{ Tzec} \\
 \text{minus } 9.10.11.9.6 \quad 13 \text{ Cimi } 14 \text{ Tzec} \\
 \hline
 5.12.9.15
 \end{array}$$

... or 40515 days, which equal 111 vague years of 365 days or 69 canonical cycles of Venus, counted, Maya-style, as 584 days each, plus 219 extra days, a remainder that is the difference between 584 and 365.

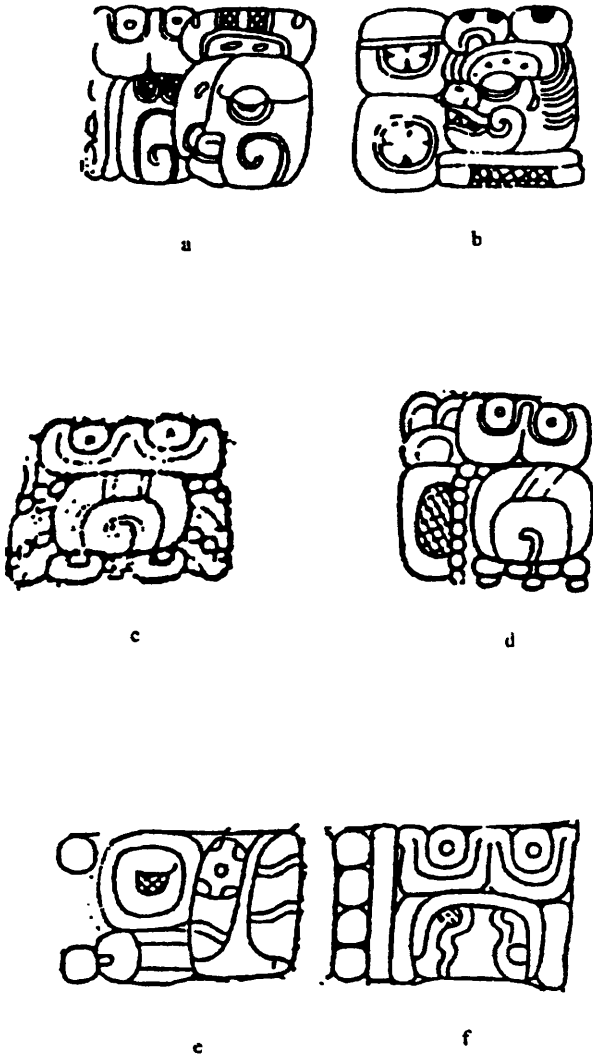


Figure 32.3. Various examples of the Large Venus Compound

Modified and augmented, the LVC is found again on the same monument after the date 9.10.17.2.14 13 Ix 17 Muan, or 2,028 days after 9.10.11.9.6. After this CR follows a long phrase that ends with the name of the problematic ruler of the site: a jaguar carrying the T168 superfix, the “Ben Ich” in Thompson’s terminology. On Monument 8 there is repeated the same CR 13 Ix 17 Muan along with the LVC (Figure 32.4), which is now followed—just like the example on Yaxchilan Lintel 41—by the glyph for capture, and which continues with another long phrase that also ends with Ben Ich Jaguar. This or the glyphs that follow the capture verb ought to correspond to the name of the captive.

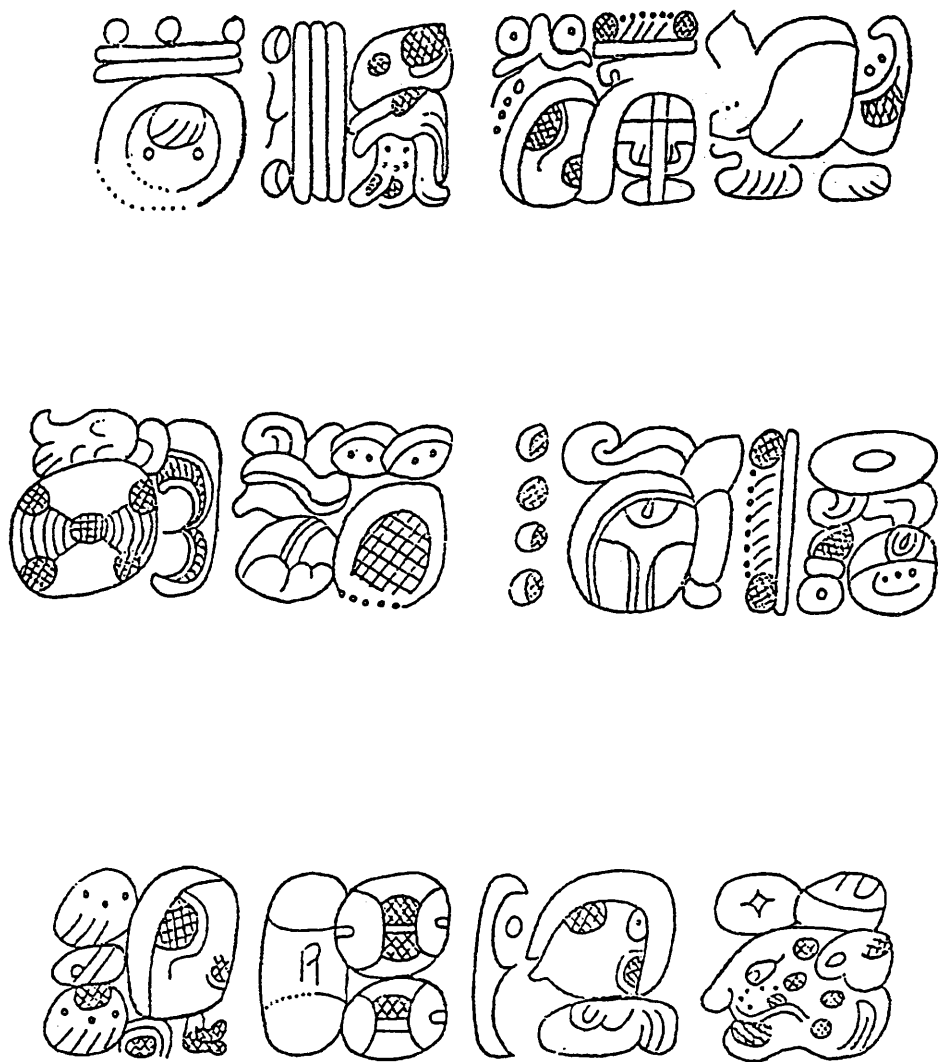


Figure 32.4. Tortuguero Monument 8

On the same monument is another glyph for capture: immediately after the CR (9.10.17.1.2) 7 Ik 5 Kankin. That is to say, as is customary, the verbal expression follows the CR, without indicating something specific with an interposed glyph, as happened with the CR 13 Ix 17 Muan. Engraved on a possible earspool of greenstone we again find two versions of the LVC in a highly simplified form after the CRs of 13 Ix 13 (sic!) Muan and 10 Kan 17 Yax.

As we have just seen, the LVC is linked three times at Tortuguero to the CR 13 Ix 17 Muan—the same position 17 Muan that is also found at Altar de Sacrificios, Palenque, Aguateca, and Dos Pilas. In the case of Panel 4 at Altar de Sacrificios, it is as though the

date ought to be read 9.14.2.0.14 (?) 12 Ix 17 Muan. By connecting this date to Tortuguero we get:

$$\begin{array}{rcl}
 & 9.14. 2. 0.14 & 12 \text{ Ix} \qquad 17 \text{ Muan} \\
 \text{minus} & 9.10.17. 2.14 & 13 \text{ Ix} \qquad 17 \text{ Muan} \\
 \hline
 & 3. 4.16. 0 &
 \end{array}$$

This equals, without a single remainder, 40 canonical cycles of Venus of 584 days.

The following cases from Palenque, Aguateca, and Dos Pilas have an unequivocal reading:

Palenque, Initial Series Vase	9.18.9.4.4	7 Kan 17 Muan
Aguateca, Stela 2	9.15.4.6.4	8 Kan 17 Muan
Dos Pilas, Stela 2	9.15.4.6.4	8 Kan 17 Muan

The difference between both dates is again 3.4.16.0, or 40 revolutions of Venus.

Finally, there is one of the steps of the west hieroglyphic stairway at Dos Pilas (Figure 32.5),¹ from which we have the following chronological information: 5.1.11 counts toward 3 Ix 16 Muan, then another seven days to 9 Imix 4 Pax. Our LVC follows not only the distance number, but also the CR 3 Ix 16 Muan. In the CR 3 Ix 16 Muan are two apparent errors: in normal circumstances, the day Ix should not be connected with the month coefficient of 16, and subtracting seven days from 9 Imix 4 Pax arrives at 2 Ix 17 Muan. Acceptable Long Count dates of these positions are:

$$\begin{array}{rcl}
 & 9.12. 0. 8. 3 & 4 \text{ Akbal 11 Muan} \\
 \text{plus} & 5. 1.11 & \\
 \hline
 & 9.12. 5. 9.14 & 2 \text{ Ix 17 Muan} \\
 \text{plus} & 7 & \\
 \hline
 & 9.12. 5.10. 1 & 9 \text{ Imix 4 Pax}
 \end{array}$$

There is a surprising parallel with Stela 2 of this site (and with Stela 2 of Aguateca), where seven days are counted from the position 17 Muan (with LVC) to arrive at 4 Pax, although in this case some 58 vague years later than the date on the hieroglyphic stairway.

On a riser from the eastern portion of the stairway our LVC is found between the CR 6 ? 2 Kayab (the earliest date in Dos Pilas?) and the main sign of the Tikal Emblem glyph, apparently to help outline interesting geographical and historical relationships between diverse Maya sites in the Peten; we will return to this topic below.²

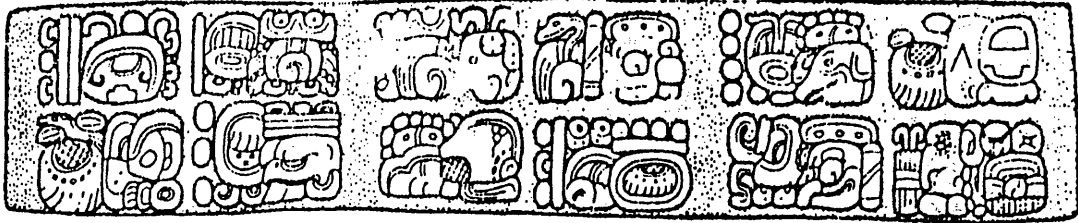


Figure 32.5. Dos Pilas Hieroglyphic Stairway 2

The importance of the date 9.15.4.6.4 8 Kan 17 Muan in the Petexbatun region is clear, not only because the date occurs on two monuments from two distinct sites, but also because at Dos Pilas it includes a Lunar Series with the Initial Series; the references to the sun, moon, and Venus may provide the long-awaited touchstone for the correlation between Maya and Christian dates.

The only glyph accompanying this date is our LVC, here associated with the Emblem glyph of Seibal; that which follows—both here and at Aguateca—is a distance number of only one day, arriving immediately at 9 Chicchan 18 Muan. Directly thereafter follows a glyphic compound, surely of verbal nature, that begins with T333, that is, the axe associated with the T25 affix, the same affix that is also present in capture glyphs, which we have already referred to in regard to Yaxchilan and Tortuguero. Probably it has an analogous meaning here.

The displacement of one day in relation to 17 Muan is puzzling, for on the hieroglyphic stairway we find a wavering to the incorrect position of 16 Muan. This date has already been shown to have a connection with the LVC at Caracol (Stela 3) and Naranjo (Hieroglyphic Stairway 1), in both places corresponding to 9.9.18.16.3 7 Akbal 16 Muan. By calculating the differences between these dates we get:

$$\begin{array}{rcl}
 \text{Dos} & & 9.15. 4. 6.4 \quad 8 \text{ Kan } 17 \text{ Muan} \\
 \text{Pilas/Aguateca} & & \\
 \\
 \text{Caracol/Naranjo} & \text{minus} & 9. 9.18.16.3 \quad 7 \text{ Akbal } 16 \text{ Muan} \\
 \hline
 & & 5. 5. 8.1
 \end{array}$$

that is to say, apart from a one-day difference, precisely 65 canonical cycles of Venus, as well as 104 vague years or two calendar rounds of 18,980 days.

I do not know the hidden reasons that motivated the one-day deviation from a number as significant as 5.5.8.0, which is also attested in the Dresden Codex. But such reasons must have existed, as happens also in a somewhat similar—although even better disguised—example at Yaxchilan. At this site are found four sculpted scenes, where a curious baton with special characteristics constitutes an important ceremonial symbol; this image occurs on Stela 11 and on Lintels 9, 33, and 50, although the last one has to

be ignored since it lacks readable dates. Stela 11 displays the rulers Shield Jaguar and Bird Jaguar; Lintel 33 has only Bird Jaguar, and Lintel 9 has, once more, Bird Jaguar as well as a youth. The following dates are connected to the scenes:

Stela 11	9.15.9.17.16	12 Cib 19 Yaxkin
(plus 6 exact years)	6. 1.10	
Lintel 33	9.15.16.1.6	5 Cimi 19 Yaxkin
(plus 21 years and 1 day)	1. 1.5.6	
Lintel 9	9.16.17.6.12	1 Eb End of Yaxkin

(This last date is, in turn, exactly 2.5.0.0 or 45 tuns after 9.14.12.6.12 12 Eb 0 Pop—the first days of the year!—the date of an important event in the life of Shield Jaguar.) On one hand, then, the baton rite was celebrated on the last of Yaxkin, but in the case of Lintel 9 it was thought desirable to make this event coincide with the forty-fifth tun anniversary of the event celebrated on 9.14.12.6.12. The solution to this problem was to use the contrivance of transcribing the expected 0 Mol as End of Yaxkin.

Apart from the examples of the LVC described above, there are other sites with the following five dates:

- (1) *Palenque*, Temple of the Inscriptions (Figure 32.3, c), at 9.12.0.0.0 10 Ahau 8 Yaxkin. On an earlier occasion (Berlin 1977: 140), I had already insisted on the planetary nature of the glyph.
- (2) *Tikal*, Temple IV, Lintel 3 (Figure 32.3, e), at 9.15.12.2.2 11 Ix 15 Chen. As in the example from Palenque, there then follows the glyph for “east,” the cardinal direction typically associated with Venus in its aspect as morning star. In addition, the CR that follows is 12 Akbal 16 Chen, that is to say, only one day later, as indicated by a variant form of a distance number: the kin sign (for “sun”) inset between the glyphs referring to the “sky” and “earth.” Combined with the Venus sign of our LVC, it appears to reveal a curious association with Venus, much like the example from Dos Pilas.
- (3) *Tikal*, Temple IV, Lintel 2, at 9.15.12.11.13 7 Ben 1 Pop. Here the arrangement is in reverse: a CR of 6 Eb 0 Pop precedes the date with the same distance number of one day, in the same variant mentioned above, clearly establishing some relation to the beginning of the year.
- (4) *Tikal*, bones (Figure 32.3, b), at 9.11.19.4.3 (?) 6 Akbal 16 Zac.
- (5) *Piedras Negras*, Throne 1 (Figure 32.3, f), at 9.17.10.6.1 3 Imix 4 Zotz (?).

Another aspect still needs to be discussed. In the LVC there is usually found beneath the Venus sign proper either T575 or T526 (Caban), this last with a meaning that is clearly

geographical, perhaps with the meaning of earth, community, or region. This geographical aspect may be understood easily by the following.

- (1) At both Caracol and Naranjo occurs the date 9.9.18.16.3 7 Akbal 16 Muan, followed by the LVC. In the case of Naranjo, there is, underneath the Venus sign, not the expected T575 or T526, but the Emblem main sign of Naranjo itself; at Caracol there is found the T575 glyph, but also, to the right side, the Naranjo Emblem (Figure 32.3, a). (By the date 9.9.13.4.4 9 Kan 2 Tzec, which is recorded at Caracol, the combination of T575 and the Emblem glyph of Naranjo had already been used in this position to refer to the neighboring site.) We can deduce, then, that this important event was celebrated at Naranjo as well. If, as Satterthwaite supposed many years ago, the same ruler—whom I called Ruler Ic in my 1977 book—ruled both sites at the same time, we can understand that the two might refer to the same event in their respective hieroglyphic texts.

When I studied the dates of the first historical period of Naranjo, there arose, almost against my wishes, several differences between the dates that appeared to have Venus associations. The most important was—and this had already been noticed by Thompson (1950: 227):

$$\begin{array}{rcl}
 9.7.14.10.8 & 3 \text{ Lamat } 16 \text{ Uo} & \\
 \text{plus} & 2.5.7.12 & \\
 \hline
 9.10.0.0.0 & 1 \text{ Ahau } 8 \text{ Kayab,} &
 \end{array}$$

in which 2.5.7.12 represents 28 canonical cycles of Venus, at 584 days apiece. Since 9.7.14.10.8 3 Lamat 16 Uo is also the birth date of Ruler Ic, there arises the suspicion that this is a contrived date, and not the exact biological date of birth. Thus, if it is considered that this ruler was born with some relation to Venus or its *numen* (although, to our confusion, it is his father [?], and not this person, who includes the Venus glyph in his name), it is understandable why he would celebrate a great festival dedicated to the planet or to a related god. He was enthroned at Caracol on 9.9.4.16.2 10 Ik 0 Pop (again the first day of the year!), and the great Venus festival took place 14 tuns and one day later (the one-day difference perhaps being more troublesome for us than for the Maya!). Moreover, the importance that he assigned to his accession date at Caracol is clear from the katun anniversary recorded at 9.10.4.16.2 on the Hieroglyphic Stairway at Naranjo.

- (2) In the case of Dos Pilas, the Emblem of Seibal is found underneath the Venus sign; at Aguateca, the sign T575, here in atypical form, occurs beneath the same Venus glyph (Figure 32.3, d). At its side is the Seibal Emblem with the T59 superfix, that is, the locative *ti*, a reading Eric Thompson deduced from the sign's appearance in Landa's transcription of the phrase *ma in kati* (= "I don't want to"). Accordingly, the glyph should read "in Seibal."³ I interpret this information to indicate that the great

Venus ceremony took place at Seibal and that the Halach Uinic of the Petexbatun region played a large role in this event, since, in the stelae of Aguateca and Dos Pilas, the date of the event constitutes the base for the remainder of the texts.

There is room here for some digressions that may or may not be correct. From the recent excavations carried out at Seibal between 1965 and 1968 under the direction of A. Ledyard Smith—the legitimate heir to the best traditions established by the worthy Carnegie Institution—it is known that the origin of Seibal goes back to the Preclassic period. Through time the site grew notably in size, but then experienced a sudden, pronounced contraction that reduced it again to a small town or settlement. It would not be until more or less 9.16.0.0.0 that Seibal again became an important center.

All of this is based on the evidence of ceramics, since, up to the present, no inscriptions have been found at Seibal dating to before 9.16.0.0.0; after this date, monuments were erected until 10.3.0.0.0 (Stela 20). The earliest text is found spread over a group of panels; it begins with the Initial Series 9.15.13.13.0 4 Ahau 3 Uo, to which distance numbers are added to arrive at 9.16.0.0.0, the dedication date of the panels.⁴ Among the non-calendrical glyphs are the Emblem glyphs of Seibal and also of Petexbatun. As a result, our stelae at Aguateca and Dos Pilas, both dating more or less to 9.15.5.0.0, come before the earliest dated monuments at Seibal, yet already contain the Emblem glyph of Seibal; on present knowledge, this glyph appears to have been coined, not at Seibal, but by the people of the Petexbatun region.

Putting two and two together, it may well be that the important date of 9.15.4.6.4 indicates the establishment of the Petexbatun dynasty as the rulers of the—until this point—illiterate Seibal on a date selected because of some special connection to Venus. Thereafter, and with the protection of its new rulers, Seibal burst forth in a spectacular development, a fact that, I believe, brought with it the arrival of expert potters from the lower Usumacinta River and, later still, the arrival of people with non-Maya traits. Cultural life would last longer in this corner of Guatemalan Peten than in other, great southern cities, witnessing a process of cultural transformation similar to that in northern Yucatan, especially in Chichen Itza, although on a smaller scale and for a shorter time. In the same way, the date 9.9.18.16.3 with its large Venus sign may well indicate the change from a local dynasty in Caracol (a small city, already literate, although perhaps not as much so as Seibal) to another one from Naranjo.

If the proverbial Martian were to study some twenty calendars used by the inhabitants of Earth, corresponding to the most diverse years within a period of some 200 years, he would find it only too difficult to understand why carnival festivals occur on such a variety of dates within these calendars. And although he might be able to detect certain constant elements, without, of course, knowing all the hidden, underlying rules of the Christian calendar (and not taking into account the meddling of civil authorities), he would take some time before deciphering this apparent mystery, although, in reality, it is not much of one.

We find ourselves in the same situation with respect to the Large Venus Compound: In many cases we observe that it relates to the position 17 Muan (plus or minus one day), and that the factor of 584 days (= 1 canonical cycle of Venus) is basic to some

of its intervals. Yet we are completely ignorant of the concrete conditions that led the dates to be recorded now in one city, now in another, hundreds of kilometers away. Perhaps much as in the Western, Christian world, the dates bring to mind the great regional sporting events or supplications to a saint or festivals in the saint's honor. These festivities take place periodically, but also occur, contrary to the usual rules, on occasions of public calamities, such as war, drought, flooding, birth of princes, etc.

Be this as it may, all analysis appears to justify the following conclusions. On different occasions, the Maya celebrated great ritual festivals in relation to the planet Venus or to a deity linked to it and its movements; such celebrations involved human sacrifice. Or to put it another way, in the large Venus compound were joined aspects at once astronomical, historical, and religious.

NOTES

1. The current designation for the monument is Dos Pilas Hieroglyphic Stairway 2. [Editors' note]
2. The Long Count position is 9.11.4.5.14 6 *Ix 2 Kayab. It is not the earliest date at Dos Pilas, nor is it the earliest on the stairway. [Editors' note]
3. We note in passing that, in all the elements analyzed here, the main sign of the Emblem, stripped of its usual affixes, is clearly geographical in function. This appears to confirm the suspicion that the main signs are the names of different Maya cities. [D. Stuart and Houston (1994) came independently to the same conclusion. (Editors' note)]
4. Berlin is referring to Seibal Hieroglyphic Stairway 1, recently published by John Graham (1990). [Editors' note]

Part Five

History

Among the most perplexing aspects of Maya decipherment is its tardiness in revealing the historical content of Mayan script. The clues were there: early statements by eyewitness observers, even the extraordinary, prescient statements by Bowditch, Spinden, and Genet. (As we shall see below, Genet in particular made a cogent case through observations about naming practices on the Yaxchilan lintels and parallels with post-Conquest documents.) Whether Eric Thompson was responsible for such blindspots can provide at best a partial answer. Certainly Thompson was an enthusiastic student of Maya religion and mythology and an enormously influential figure in Maya epigraphy. Thompson's familiarity with the Dresden Codex and his connection with Ralph Roys, his linguistic arbiter, may have strengthened his belief that Classic Maya texts contained highly esoteric information. It is probably no coincidence that Roys' last and greatest translation, of the deliberately abstruse Ritual of the Bacabs (1965), involves a text that conceals as much as it reveals. The notion of recondite levels of meaning, encased within more accessible phrasings, most likely affected Thompson's view of Maya inscriptions. He may also have been stimulated not so much by the historical content of Mixtec codices as by the cosmological patterns in the Borgia group of Mexican codices, so thoroughly studied by Eduard Seler, described by Thompson as the "Nestor of Middle American studies" (Thompson 1950: 31; see also Kubler 1991: 165).

But there were other reasons as well. Until 1950, the only successful decipherments dealt with chronological and astronomical matters. According to Thompson, the remaining, undeciphered glyphs might still be elucidated by applying John Teeple's theory of "determinants" (Thompson 1950: 317–20). Why, then, track down unpromising leads, moving in unpromising directions? In our view, Thompson did not so much create a scholarly mentality in which priest-kings humbled themselves before the march of time as synthesize and embody the Zeitgeist of Maya studies. That he accomplished this so brilliantly and tenaciously made his perspective more compelling than it might have been. Moreover, Bowditch and Spinden couched their observations as stray, incidental remarks, rather than as the results of any program of study. Genet's lack of influence can be explained sociologically. Few people read or knew of his works, published in French and of limited distribution. Also, Genet died young and, like Knorosov, worked well outside the mainstream of Mayanist research. Unlike Knorosov he had no champion after his death, no David Kelley or Michael Coe to maintain the visibility of his ideas.

History did eventually come to Maya studies, although here too the impact only gradually began to affect Maya scholarship. What strikes us thirty years later is not so much that Berlin and Proskouriakoff contributed many breathtaking results, but that others failed to do likewise and that the results were not as explosive initially as they might have been. In the decade after the seminal papers on historicity, only a few related papers appeared, mostly by David Kelley. Perhaps this was because Proskouriakoff labeled her contributions "hypothetical" (although we doubt she felt this to be the case), but most of all this resulted from the specialized nature of glyph studies at the time. From our vantage point of Maya Weekends and Glyph Meetings, open to hundreds of amateur enthusiasts, the tiny number of specialists then active in Maya epigraphy is difficult to comprehend—it was a discipline as complex and daunting as it was restricted in its practitioners, with few well-trained scholars to test and explore ideas. To us, the real significance of the 1973 Mesa Redonda Meeting was not so much the presentation of a new "synthesis" as its democratization of glyph studies, shifting the center of gravity from the Ivy League and Ivy League-trained scholars to a broader group, in which institutional affiliation mattered less than a passion for hieroglyphs; the meetings also expressed a positivistic will to decipherment, which Maurice Pope (1975) characterized as a key element of successful code-breaking. Thompson might have used his final years to step once again to the forefront, but his life-long projects, including a commentary on the Dresden Codex, beckoned instead.

Since the time of Berlin and Proskouriakoff, historical treatments of Mayan script have proceeded in the following way. There is, first, a reconstruction of dates as an armature of dynastic events; then comes the sketching of life-crisis events in the lives of Maya rulers and other individuals, including rituals of death and accession; third, we devise a dynastic sequence; fourth, with additional decipherments, we explore genealogical relationships between Maya rulers, and, finally, contextualize Maya kings in terms of lesser lords (frequently related to monarchs) and interactions with other dynasties, often in regard to discussions of political organization. These treatments take several forms, ranging from bare dynastic sequences (Mathews and Schele, this volume) to specific studies of historical interactions and their titular referents and as far as thematic investigations relating to major shifts in Late Classic society (Schele and Freidel 1990) and, most inclusive of all, a comprehensive chronicle, essayed by Proskouriakoff in her final years (Proskouriakoff 1993). Others have concentrated on in-depth studies of specific sites, with an emphasis on the archaeological context of inscriptions (Houston 1993).

Yet the problem here, as exemplified in Joyce Marcus' recent book on Mesoamerican writing systems (1992), is the blurring of modern linkages of historical information and our thematic groupings of them with the way the Maya themselves presented such material. For example, the genealogical chart is a modern construction. The Maya preferred to record sequences of succession, regardless of actual genetic connection, as well as glyphic and figural representations of the ascending generation. (The latter became more important in the Late Classic period, presumably because of increasingly heated conflicts over succession, in which, as among the Mixtec, the purity of bloodlines played a critical role [Spores 1984: 69].) The notion of a chronicle is doubtless reflected in the day-by-day record painted on Structure B-XIII at Uaxactun, but a comprehensive summary such as Proskouriakoff's represents a tool for Mayanist scholarship, not a reflection of Classic Maya historical reckoning. For Mixtec codices Mary Elizabeth Smith (1983: 260) demonstrates a schematic pattern of historical selection and winnowing; scribes suppressed or rephrased events to place them in the best possible light for a particular dynasty. Similarly, H. B.

Nicholson (1971) writes of "pattern history" founded in an idea of recurrent, like-in-kind events and discusses "genres" of historical text. The challenge for the next phase of Maya historical research is to respect the nuances of their history as they recorded it: What were the "genres" of Maya texts, and how can they be identified? How, to paraphrase David Lowenthal (1985: 218), did the Maya impose "narrative structures" on their history? To what extent was the concept of "history" much of a consideration in profoundly ritual texts? How did Maya sites differ from one another in recording the past? And what differences did they conceive between the events and structures of the far past, the immediate past, and the near and distant future? Such perspectives, in which traditional concerns of balancing sources, weighing of accuracy, and distinguishing "myth" from "history" are almost beside the point, remain underdeveloped in Maya studies and barely recognized as a valid research problem.

Notes on the Report of Teobert Maler in Memoirs of the Peabody Museum, vol. II, no. 1

Charles Pickering Bowditch

Charles Pickering Bowditch resembles Daniel Brinton in several ways—gentlemen who were not only patrician in background but boundless in their curiosity, with the means to pursue independent lines of thought. Bowditch descended from a distinguished family, which included Nathaniel Bowditch (1773–1838), the mathematician and author of the renowned American Practical Navigator: An Epitome of Navigation, which allowed Yankee traders and whalers to determine latitude and longitude through lunar observations. In his early years, C. P. Bowditch received his education from a tutor, but later enrolled at Harvard University, which suspended him briefly for his boisterous complaints about an unpopular faculty decision (Storey 1923: 306–7). The fervor in Boston for the abolitionist cause, and for the Civil War that resulted from it in part, led him to enlist, against his family's initial objections, as an officer in a "colored" regiment, although at somewhat lower rank than his famous (if short-lived) contemporary, Colonel Robert Gould Shaw. After the war, Bowditch attempted to increase his fortune in the Pennsylvanian oil-rush of 1865, but found more solid employment as an administrator on the Wadsworth estate in the area of Rochester, New York, a latifundium that still exists in the fox-hunting country near Geneseo. Later, Bowditch returned to Boston and to a lucrative career as a custodian of trust property, president of a life insurance company, director of a railroad corporation, and one of the first vice-presidents of the American Bell Telephone Company, which he steered away from several unwise decisions (Storey 1923: 311).

But it is as a Mayanist that scholars remember Bowditch, and for the endowment of a chair in archaeology held for many years by Gordon Willey, the premier Maya archaeologist in the third quarter of the twentieth century. A trip to southern Mexico and Yucatan in 1888 sparked an interest in all things Mayan, leading Bowditch, unsurprisingly, to channel his energies through the Peabody Museum of Harvard University, where he served as a powerful and emphatic voice on the faculty as well as a member of its board of trustees. Virtually all the funding for the Peabody Museum's early expeditions, in addition to the acquisition of rare volumes and controversial collections of artifacts, such as those by Edward Thompson from Chichen Itza, came from

Written in 1901 by Charles Pickering Bowditch (1842–1921). Excerpted from Bowditch 1901.

the deep pockets of Charles Bowditch (Tozzer 1921: 354). His own interests in Maya glyphs ran to the calendrical, numerological, and astronomical, perhaps, as Alfred Tozzer suggested, because of Nathaniel Bowditch's talent in these matters (Tozzer 1921: 355). Most descriptions of Bowditch's personality reflect the strong, even peppery characteristics of people whose resources allow them the privilege of unfettered speech: he was "forceful," "wrathful before underhandedness," "impulsive," "vigorous" and giving of "momentary offence," "firm in maintaining opinions," "not suffering fools gladly or tolerant of error," along with a very real and well-attested generosity (Tozzer 1921: 357; Storey 1923: 307, 315). Both Edgar Hewett and Sylvanus Morley felt the sting of Bowditch's reproach and distrust (Hinsley 1986: 226), and the long-standing antagonism between some members of the Peabody Museum, such as Alfred Tozzer, and the Maya research program of the Carnegie Institution probably stemmed to some degree from Bowditch's wrath. One suspects that Bowditch's personality combined the contradictory impulses of largesse and a proprietary interest in the epigraphic discoveries made with his subvention.

Included here are passages from a privately printed pamphlet by Bowditch that draws upon recent finds made by Teobert Maler, who explored Mexico and Guatemala with funding from Bowditch. Truly prescient are his remarks concerning the historical nature of inscriptions at Piedras Negras, presented in a logical, convincing fashion almost sixty years before Tatiana Proskouriakoff came to the same conclusions.

The time which elapsed from the first to the final date in each case is as follows:

In Stela 1, from 5 Cib 14 Yaxkin (1) to 5 Ymix 19 Zac (33) is 1.12.12.5., or 11,765 days = 32 years 85 days.

In Stela 3, from 5 Cib 14 Yaxkin (1) to 11 Ymix 14 Yax (38) is 1.17.12.5., 13,565 days = 37 years 60 days, to which, if we add 4.19., we have 13,664 days.

Either of these terms would fit in very well with the reign or rule of a chief, or with the lifetime of a warrior.

Let us suppose the first date of Stela 3 to denote the birth; the second the initiation at the age of 12 years 140 days, or the age of puberty in those warm climates; the third, the choice as chieftain at the age of 33 years 265 days; the fourth his death at the age of 37 years 60 days. After this, 4 uinals 19 kins would bring us to the fifth date, the beginning of Katun 14.

Stela 1 might show also first, the birth; second, the beginning of the initiation at the age of 12 years 135 days; third, the end of the initiation at the age of 12 years 140 days; fourth, becoming chief at the age of 32 years 85 days, and the remainder of the history might be on the sides of the monument. Could the two men represented on these stelae have been twins having the same birthday?

Again referring to glyphs A10, D3, D7 and E4, it is possible that the face with Akbal refers to darkness and that with Kin to-day. In this case the first, second and fourth dates would refer to night ceremonies, perhaps, and the third to a day ceremony. It will be noticed that all the dates are the 14th of the same month, as if the 14th day were selected, for an individual for certain ceremonies, as we select the same day of the year of birth as a "birth-day." In this case, the birth, puberty and death ceremonies would be in the night, and the choice as chief in the day-time. But as these dates occur in different years,

if we suppose 1 Pop of the year in which 14 Yaxkin occurred was July 16th, we have the dates as follows, allowing 1 day every four years for leap years:

1. 4 Yaxkin, November 26th.
2. 14 Kankin, April 12th.
3. 14 Uo, August 10th.
4. 14 Yax, January 16th.

This might lead us to think that the Akbal referred not to the night, but to the dry season or winter, the season when vegetable growth slackens, and the Kin sign not to the day-time but to the wet season, the season of growing vegetation, for the months from November to May are the season of least growth in the region of Central America, and dates 1, 2 and 4 all fall in that season, while the third falls in the wet or growing season. But one might suppose that the months themselves would show this clearly.

All of this is of course speculation, but it shows that it is not inconceivable that the stelae may have some historical value.

“Portraiture in Central American Art”

Herbert Joseph Spinden

In the history of Maya research, few books compare with A Study of Maya Art (1913) by Herbert J. Spinden. It is an enduring book: in its pages Spinden displayed an exceptional capacity for analyzing and explaining the complex elaborations of discrete motifs that compose Maya art and its symbolism. In the following article, he applied similar qualities to a more restricted topic: the question of portraiture in Mesoamerican art. Spinden's conclusion was affirmative, in that he adduced evidence that confirmed the existence of such representations. His ideas on Maya sculpture are tantalizing because they prefigure modern interpretations; witness his observations about the Piedras Negras ascension stelae, which he interpreted as individuals seated upon thrones, noting the intervals of eighty, forty-five, and sixty years between their dates. This paragraph apparently hints at the existence of individual rulers, but Spinden did not advance a clear statement in this regard. Moreover, the bat glyph compound, suggested by Spinden to mean “here follows a name,” has recently been interpreted by D. Stuart (1986a) to read “his sculpture” and is indeed followed by name clauses.

Why did Spinden fail to follow this line of enquiry? Spinden had an extensive command of Maya epigraphy as it was then understood. He does not seem to have been especially interested in noncalendrical texts, however. In 1919, he proposed a correlation of Maya and Christian calendars that gained considerable attention. In later years, he devoted much of his energy to finding support for that correlation, which was contested most strongly and successfully by J. E. S. Thompson.

Spinden was born in South Dakota. After youthful ventures as a railroad worker and gold seeker in Alaska, in 1902 he entered Harvard University, where he was among the first to study under Alfred M. Tozzer. He obtained his Ph.D. in 1909 with an early version of his study of Maya art and soon thereafter became assistant curator of anthropology at the American Museum of Natural History, New York. In 1917, the museum published his book Ancient Civilizations of Mexico and Central America, which remained an important synthesis until the middle years of the twentieth century. While his major interest lay in Maya art and history, Spinden also made important contributions to the study of other Mexican peoples. His 1935 study of

Written in 1916 by Herbert Joseph Spinden (1879–1967). Excerpted from Spinden 1916. The plates from the original article are omitted, although cited in the text.

Mexican pictorial manuscripts was among the earliest contributions to the unraveling of what later would be identified as Mixtec dynastic genealogies.

Spinden's professional career was entirely dedicated to museum curatorship; he had appointments at the Peabody Museum of Archaeology and Ethnology, the Buffalo Museum of Science, and the Brooklyn Museum, where he served from 1929 until his retirement in 1951. In a short biographical note, Eric Thompson reveals a little about Spinden's personality, especially "his inability to stop talking, his untidiness and his air of needing to be mothered," or, as Gregory Mason observed on a trip with Spinden, his love of "free-for-all, Donnybrook of badinage, personal animadversion and 'ragging' which has kept up with no intermission except for sleep" (Thompson 1975: v). More importantly, Spinden had an inability to discard "an idea he had once advanced" (Thompson 1975: viii). Regrettably, he did not use this stubbornness to support and amplify his remarks about Maya history.

[p. 434]

Among the human beings represented in ancient Mexican and Central American art are there actual portraits of individuals? Accustomed as we are to judge the works of alien peoples in the light of Europe, hardly one of us has not been tempted to see likenesses of old-time rulers in the graven stone faces at Copan, Chichen Itza, and other Maya cities, and to catch the personality of men from the masses in the little heads of baked clay that strew the fields from Central Mexico to the lakes of Nicaragua. But mere human interest is, after all, a dangerous guide to knowledge.

[pp. 442–50]

Maya Sculptures of the Great Period. The last and most important division of our subject still remains for consideration, namely, the monumental sculptures of the early Maya, dating from the Great Period (400–600 A.D.). The monuments on which human beings are represented include stelæ, altars, lintels, and mural panels. The medium is usually limestone of varying fineness, although stucco is not unknown. Of these monuments the most numerous and important are the great plinths and slabs sculptured on one or more sides, that are called stelæ. These are architectural in the sense that they beautify the approaches to temples or adorn the ceremonial centers of the ancient cities. Inscriptions that contain dates are found on most stelæ as well as on other monumental pieces. This fact has given rise to a theory that the monuments in question are primarily markers of time, and particularly of round numbers of days in the Maya notation.

Captives on Memorials of Conquest. Judging by the graven pictures, many monuments of the southern Maya are memorials of conquest. Captives bound with rope or held by the hair are actually represented in several instances. On a still greater number of monuments the principal personage stands upon a crouched or prostrate man devoid of all signs of rank and power. Sometimes this debased figure has his arms bound and is clearly a captive, while in other cases the expression of woe upon his countenance evinces a state that is far from happy. Even when captives themselves are not shown, the

shield and spear of war are seldom wanting. Now it is obvious that the presence of vassals and overlords on the monuments increases the probability that actual historical persons are being portrayed.

The lintels and stelæ of Yaxchilan and Piedras Negras are richest in scenes that depict the triumph of war, and an examination of representative details might prove timely. Two captives seized by the hair are reproduced in plate VIII, a and b. The faces are more carefully drawn than in the majority of cases when captives are represented. While there is an undeniable feeling for individuality in the expression, there are no marks by which the portrait character can be definitely established.

Lintel 4 at Piedras Negras pictures two soldiers returning from war with booty and a captive which they present to their commanding officer. Stela 12 at the same city doubtless memorializes a conquest of importance. A richly attired war-chief on a lofty throne looks down upon a huddled group of miserable captives, bound with rope and guarded by two standing soldiers. The captives (plate VIII, c) have apparently been degraded, since the customary ear-plugs have been taken from their ears, leaving the perforations clearly visible, while the hair is roughly knotted on top of their heads. Permanent body decoration, either tattoo or scarification, is seen in bead-like details across the chin, at the corner of the mouth, the base of the ear, and the tip of the nose, but all ornamental objects of dress are wanting. There is one person seated above this group of unfortunates who may be an important chief received with the honors of war. He still wears an ornamented ear-plug, a feather head-dress, a necklace, and a decorated apron . . .

All the human figures in this tableau, including three victors and nine victims, have short incised inscriptions upon their bodies or near their heads. These inscriptions consist of two or more glyphs, and it seems reasonable to suppose that names of both persons and places are recorded. The head of a bat (Zotz') with a knotted prefix (Figure 34.1) begins most incised inscriptions on this and other monuments at Piedras Negras, and indeed at most Maya cities in the Peten region. This glyph may have some such general meaning as "here follows a name."

The faces of the captives wear expressions of fear and sullen anger. The profiles are varied for all cases, but the most marked individuality is seen in the downcast old man at the observer's right, and in the heavily bearded person who sits next to him. Drawings of captives from other cities emphasize the intention to degrade these unfortunates, and by contrast to emphasize the beauty and splendor of the victors.

The Principal Personages. We have seen that miserable and dishevelled captives are treated with crude realism. But does this realism ever manifest itself in the treatment of

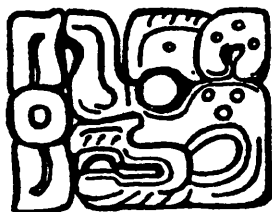


Figure 34.1. Zotz glyph



Figure 34.2. Sketch of a figure on Lintel 2, Temple III, Tikal

the principal subjects? As a general rule the principal subjects are characterized by dignity, repose, and conventional beauty. At Tikal, however, there is a human representation with a torso so aldermanic in its development that no one can pretend it was carved thus for aesthetic effect. This is on the underside of Lintel 2, Temple III. The beams of zapote wood are still in position, but the sculptured surface is in such an advanced state of decay that no drawing of it has ever been published and only a rough sketch (Figure 34.2) can be given at this time. On Lintel 1 at La Mar is drawn a chieftain whose bodily proportions are somewhat gross, and the same may be said of the figure on Stela 35 at Piedras Negras.

But portraiture, if attempted at all, must ordinarily have been expressed in the face. The examples of bodily peculiarities already noted serve to strengthen the probability that the apparent facial peculiarities of exalted personages on stelæ, etc., may be regarded as intentionally realistic. Something analogous to the portrait types in pottery must be noted in the stone sculptures. Each city has usually a favorite type that can easily be distinguished from the favorite type of another city, and yet there is always a considerable play for individuality within the type. In the fixing of facial types for each city, we should not fail to consider duly the faces which occur in hieroglyphic inscriptions, as well as those which serve as supplementary ornament on the bodies of the heroic figures.

Front View and Full-round Sculptures. It seems best first to examine cases of presentation in front view and in the full round, and then to turn our attention to the more usual profile studies. The writer has elsewhere been able to show that the earliest stelæ at Copan were given over to low-relief front-view presentation, but that this rapidly developed into high relief and the full round, and that in contrast the profile view is most fittingly given in low relief. The front-view presentation may be studied to the advantage at Copan, Quirigua, and Piedras Negras.

The earliest Copan examples are archaic and show protruding eyes, block-like faces, and other defects that are remedied in later pieces. The best-preserved of the early monuments is Stela P, dating from about 350 A.D. An excellent example of the work that was done 150 years afterward is seen in Stela H, while Stelæ 5 and N are intermediate products (pl. IX, a-d). It may be noted that the proportions of the body are better in the earlier than in the later work, but that the examination of the faces on Copan stelæ shows differences in the form of features and in expression. Some details, like the eye, develop in a way that is capable of demonstration, but the variation in other details may be intended to reproduce the peculiarities of individuals. Beards are shown on a number of the latest figures, including one of the two on Stela C.

Perhaps the finest sculptured pieces at Copan are the full-round figures used as frieze decorations on temple fronts. A famous example discovered by Maudslay and labeled a "singing girl" is reproduced in plate X, together with an unusually fine head now in the Peabody Museum of Harvard University. It seems likely that both these heads represent the youthful and beautiful Maize God. At this point it may be stated that sex differences appear mostly in dress and that there are no nudes in ancient Maya art. Women are distinguished by a sack-like garment that covers the body and conceals the modeling of the breasts. Stela H at Copan, already referred to, probably represents a woman, since the skirt reaches nearly to the ankles. Stela K at Quirigua is sometimes called "the queen," but the costume is that of a man. Long-skirted persons are represented on several monuments at Naranjo and Yaxchilan. Reverting to the two heads that probably pictured the Maize God, there is no reason why actual persons noted for their beauty should not have served as models.

At Quirigua the most striking face is that on the north side of Stela E. Beards are represented on more than half the human beings at this city (pl. IX, e). At neither Copan nor Quirigua has the writer been able to find certain proof of portraiture, although all artists declare that the faces in stone could not have been carved except from living models.

There is an interesting series of monuments at Piedras Negras, consisting of Stelæ 25, 6, 11, and 14, in the order given. All present a human being seated cross-legged upon a gorgeous throne canopied by the signs of heaven. A line of footprints up the front of each throne may signify the ascension to the seat of theocratic power of the person portrayed. The dates show intervals of 80, 45, and 60 years. The face of the earliest monument is badly damaged, but those of the succeeding ones are excellently preserved and have much character (see pl. IX, f).

The Profile-view Sculptures. In the earliest sculptures of the Maya the face is represented in profile and the body in either profile or front view. The profile presentation is,



Figure 34.3. The Palenque type: (a) to (h), Palenque; (i), Chicozapotec

in fact, much more common than the front view. This is not to be wondered at, since it is effective when the relief is low and the labor of stone-cutting reduced to a minimum. Space considerations limit us to the examination of a few contrasting products.

A head form so common at Palenque that it has come to be known as the Palenque type deserves attention. It offers evidence of artificial flattening of the forehead, and possibly of the occiput, and a consequent lifting up of the peaked crown. The nose is prominent, with a high bridge, a convex profile, and a drooping tip. The mouth is often slightly open. The upper lip is short and arched, but the lower one is full, protruding, and pendulous. Although the jaw is ordinarily heavy, the chin is rounded and retreating. Such a type of face would seem to have little hope of an aesthetic treatment, yet an astonishing amount of dignity and grace is found in the low-relief profile figures, modeled in stucco or carved in stone, that adorn the temples of Palenque. A number of faces showing the wide range of variation within the limits of this type are sketched in outline (Figure 34.3).

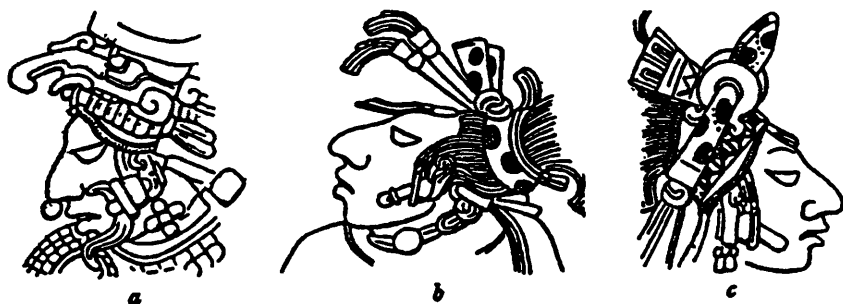


Figure 34.4. Faces on Yaxchilan lintels: (a), Lintel 2; (b), Lintel 15; (c), Lintel 41

At Yaxchilan the heads and faces show considerable likeness to the Palenque type, but are not so extreme. The eyes are often large, with heavy drooping upper lids. Careful study brings out many differences in the modeling of eyes as well as in the outlining of nose and brow. As a rule the supraorbital ridge is prominent. The admirably preserved upper portion of Lintel 26 (see pl. XI, a) represents a man and a woman, the former with left hand extended toward a jaguar head which the latter holds against her breast. The relief for the blocked-out masses is rather high, while that for details of dress and contours of the body within these masses is low. The tips of the noses are markedly undercut, so that a vivid contrast against the sunken background is achieved. The cheek and mouth of the woman bear ornamentation in tattoo. In the next illustration (b), taken from Lintel 3, the expression of the face is considerably altered by the change in eye and brow. The eye is given a bulging quality by the incised outline of the heavy upper lid that parallels the profile of the face above the bridge of the nose. The second figure on this lintel has a face of much more rugged outline. The two subjects on Lintel 42 (pl. XI, c) make a contrast of individualities even though both are drawn with the same conventions. The man at the observer's right is possibly a priest of war, as he holds out a Manikin Scepter that may in this instance be an elaborate battle ax. The person who faces him carries a shield in one hand and in the other a battle ax, or celt, of serviceable pattern. The face of this second subject is notably youthful in appearance. An incipient mustache is faintly traced upon the upper lip, and the lower one is less pendulous than is that of his companion. In Figure 34.4 the drawings picture a man (a) and two women (b and c) with lines of great delicacy and precision. The women have softer features and a lock of hair that falls down over the forehead. From this survey it appears that heads of the Palenque type have little in common except the flattened forehead and the modification of the face that results directly from this.

The Final Products of the Great Period. At Seibal, sometimes called Sastanquiqui, the principal Maya ruin on the Rio de la Pasion, there are several well-preserved sculptures in low relief upon great slabs of fine-grained limestone. They are among the finest products of Maya art and date from the end of the Great Period. Of special interest to us in our present quest are Stelæ 8 to 11, opposite the four sides of a temple mound in the principal plaza of this forest-covered city. These coördinated monuments all bear the same date, 5 Ahau 3 Kayab, which on Stela 11 is declared to occupy the position

10.1.0.0.0 in Maya chronology (equivalent to about 575 A.D.). The technique of the carving is the same for the entire group. The single subjects are preserved in profile and treated in low, flat relief, with an overlay of delicately modeled and incised detail. The personage on Stela 8 wears mittens and shoes made of jaguar feet and holds out a grotesque head in his right hand. On Stela 9 and 10 a late variant of the Ceremonial Bar is carried in both arms, and on Stela 11 a club is grasped in the left hand while seed is scattered from the right. Under the feet of the last figure a prostrate captive can still be made out. At other Maya cities “wearers of jaguar claws” and “carriers of ceremonial bars” are so frequently represented that we may presume them to have been generally recognized officers, perhaps of shamanistic character. The warrior chief in the dual aspects—benign and militaristic—of “scatterer of seeds” and “wielder of the warrior club” serves as subject for many sculptures, although the two aspects are not often indicated at one and the same time as here. The four leading men in the sacerdotal and governmental circles of Seibal may well be represented in this series of sculptures.

When we compare the faces on the four correlated monuments we find a wide range of differentiation in the group as a whole and in each face a compelling individuality. The face on Stela 8 (Figure 34.5, a) is partially concealed by a strap that passes under the eye and over the nose, and by a long scroll-like object that swings downward over the cheek and forward under the chin. The mouth is closed and straight. The rather thin lips combine with the retreating chin to form an unusual profile. On Stela 9 (Figure 34.5, b) the nose, and in fact the whole face, is long. The type is youthful. On Stela 10 the face is full, the nose short and thick, and the eye much rounder than in the previous instances, while a mustache and imperial adorn the upper and lower lips. All in all the face wears a complacent and benevolent expression. The face of the warrior on Stela 11 evinces a very different spirit (pl. XII). The sturdy and somewhat ferocious countenance on this last monument of the group is partially concealed behind a mask of the Long-nosed God. It is not unlikely that one of the rare and beautiful masks made of precious stones set in mosaic over a wooden base is here delineated. The warrior wears a mustache and imperial, and has heavy eyebrows and a cleft in his chin. The hieroglyphs on this series of monuments are few in number, and whether name-glyphs among them cannot be stated with assurance.



Figure 34.5. Seibal faces: (a), Stela 8; (b), Stela 9; (c), Stela 10

The indefinable feeling that we are gazing upon the sculptured presentment of a dead ruler is still stronger in the case of Stela 1 at Seibal. This splendid monument, characterized by ultimate simplicity of highest art, shows us a man of flesh and soul, with a face both strong and beautiful. The date is almost surely 10.2.0.0.0, 3 Ahau 3 Ceh, the latest found at any of the great southern cities. This monument may justly be called a valedictory effort of the first and most wonderful civilization of the ancient Maya, the civilization that gave to the world so many strangely beautiful products of art in stone overcast with an ineffable spirit of religion. But if we are justified in seeing a genuine portrait in this supreme example, then we may be reasonably sure that many other sculptures from Mexico and Central America are, on the basis of intention if not of achievement, to be classified as portraits.

Revue des Études Mayas-Quichéés

Jean Genet

Genet is one of the most neglected and tragic figures in Maya decipherment. Thanks to inquiries in France, where Philippe Nondedeo, Eric Taladoire, and Guy Stresser-Pean rendered great assistance, we can now say something about this enigmatic and brilliant figure. Within his short life Genet was able to prepare, among other things, the Histoire des peuples Mayas-Quichéés (1927, with Pierre Chelbatz), an unfinished two-volume edition of Diego de Landa's Relación (Genet 1928–29; see G. Stuart 1988: 30), and, in 1934, the Revue des Études Mayas-Quichéés, along with his Histoire des peuples Shoshones-Aztèques (1929) and an edition of Boturini (1933). At the time of his death, Genet left an unpublished transcription and translation of the Popol Vuh, reports and commentaries on Gaspar Antonio Chi, Thomas Gage, and Sánchez de Aguilar, and the final issue of the Revue, still in manuscript at the time of his suicide. Genet's ample means allowed him to establish a press, Les Éditions Genet, which sought to communicate his own excitement about the Precolumbian world to a wider audience, a goal shared with contemporary writers like Alfred Métraux. After the crash of 1929, financial difficulties may have affected Genet's ability to operate Les Éditions.

Genet was born in 1903, as part of what must have been a wealthy family. Stresser-Pean believes there may have been some hostilities, possibly of a political nature, between Genet and Paul Rivet, at that time the most prominent Americanist in France. As pointed out by Nondedeo and Taladoire, however, Rivet himself seems to have spoken favorably of "notre collègue" when he announced the publication of Genet's Revue in 1934. Also, Rivet was one of two members to sponsor Genet's membership in the Société des Américanistes, a gesture suggesting a relatively amicable relationship. What is far more certain is the nature of Genet's departure from this world, a suicide that was at once moving and chilling in its degree of indifferent premeditation. He sent copies of his publications and manuscripts to a number of scholars, with the comments: "Last Miscellanea by Jean Genet (with the collaboration of Madeleine Perchet-Genet). And here [is] my last article . . . I am writing it a few days before dying (M. Jean Genet, menaced by complete blindness, is killing himself with his wife . . . long since very ill . . . on December 16, 1934 . . .) in order to take leave of all my friends, of all my colleagues in Mayalogical studies, Hermann Beyer [etc.] . . . as well as others that I apologize for forgetting in these last moments" (Blom

Written in 1934 by Jean Genet (1903–34). Excerpted and translated from Genet 1934.

1935: 295). Genet had misplaced many of his papers during the last days of his life and was reconstructing them from memory before the double suicide. Apparently, this caused him to delay his death while he placed affairs in order. He eventually took his life on December 18, 1934, at the age of thirty-one.

Genet deserves far more attention than he has received from modern scholars. This neglect may stem from the fact that he worked outside the German, English, and American mainstream of Maya epigraphy. As an outsider, Genet could make insightful and, from our modern vantage, jaw-dropping observations about the nature of Maya writing. Genet was quite emphatic that many Maya inscriptions were historical, even dynastic in nature (he labeled them "Maya-Quiche" since, following C. F. H. G. de Charencey, this term was commonly applied by French linguists of the period; Khrist Vilela, personal communication, 1995). In support, he mustered numerous ethnohistoric accounts of historical texts, many recorded on stelae, as well as the correct decipherment of a "symbolic" glyph for war, linked brilliantly to an analogous Mexica expression—evidently, Genet could read Nahuatl, a skill enjoyed by few other Mayanists. In one astonishing passage, he argues that the Maya used hieroglyphs to write names, including nominal glyphs on the thighs of prisoners depicted at Yaxchilan: "One can presume that these inscriptions give the name of the said personages [elsewhere described as 'vanquished warriors'] to indicate their city of origin." Probably he could not test this hypothesis, since his access to inscriptional material seems to have been poor: most illustrations of monumental texts come from Spinden's early monograph on Maya art (1913). But Genet was not always completely on the mark. Rather improbably, he likens Maya script to that of the Kuna of Panama, who used "pictographs" that served as aides to memory and oral recitation. Yet even here Genet anticipates more recent assertions about the performative nature of glyphic reading (Houston 1994: 39). We need to know a great deal more about this remarkable epigrapher, who seems to have had a formidable and precocious intellect.

ON THE HISTORICAL CHARACTER OF THE MAYA-QUICHE INSCRIPTIONS AND MANUSCRIPTS

[*Revue des Études Mayas-Quichéennes* 1, no. 1: 4–9]

It is this rigid conception of history that brought the ancient Yucatecans to carefully preserve dates and a brief summary of past events. In fact, all of our sources emphasize the historic character of the inscriptions or books that the Spanish found among the natives.

We have a multitude of testimonies impossible to challenge that certify and prove to us that most of the Maya-Quiche epigraphic texts are of a historic nature. The first comes from Las Casas, who, without emphasizing their contents, remarked on the particular character of the inscriptions: "letters of certain characters that were not elsewhere," so he said in his *Historia Apologetica de las Indias Occidentales* (ch. CXXIII).

Diego de Landa, speaking to us of the stelae that are still found today at the site of Mayapan, in Yucatan, declares ". . . that according to the account of the Indians there were 100 and 20 years since Mayapan was depopulated, and that there are found at the

town square of that city 7 or 8 stones, each 10 feet long, rounded on one side, well shaped, and that they have some lines of the characters they use, which, being eroded by rain, cannot be read; however, they think that it is a record of the foundation and destruction of that city, and that other, similar ones are in Zilan, a town on the coast, although even higher, and that when the natives were asked about what this was, responded that they were accustomed to erect one of this stones every 20 years, that is the number they have to count ages. But this does not seem true, because according to this there ought to have been many more, and principally that there aren't any in other towns, but only in Mayapan and Zilan"¹ (*Relación de las Cosas de Yucatan*, § IX, pp. 82–85).

If Diego de Landa, who had visited the ancient princes of Mayapan (Cocome and Xiu),² thought that these "stones" or "stelae" recalled the foundation and the destruction of Mayapan, it is because he knew from a reliable source that such was the custom in Yucatan.

In another passage he speaks of a festival called "Ocna" that was celebrated either in the month of Ch'en or in the month of Yax. He said: "... they performed [this festival] each year and, in addition to this, they renovated their idols of clay and their censers, since their custom was for each idol to have a small brazier in which they burned its incense, and, if needed, they rebuilt the house or renovated it, and they placed in the wall the record of these things with their characters [Genet's emphasis]" (*Relation des choses de Yucatan*, vol. II, § XL, Yax, pp. 72–73).³

In consequence Diego de Landa is firm about the nature of the Yucatecan inscriptions: they are historical and commemorative.

His testimony is confirmed by that of Pedro Sánchez de Aguilar (born in the country, direct descendant of the conquerors), who tells us, in speaking of the Indians: "... In addition to this they counted their eras, and they noted these in their books every twenty years, and by five year periods, quarter by quarter. The first year they fixed in the East, calling it *Cuch hab*; the second in the West, the third in the South, the fourth in the North, and this gave them a dominical letter; and thus arriving at five of these periods, they make twenty years, called *katun*, and they put a carved stone over another carved stone fixed with lime and sand in the walls of their temples, or houses of the Priests: and this is seen today in the buildings, that I have referred to,⁴ and might be seen in the walls, on top of which they built in the cells of the Religious in the Convent of this city [of Mérida], that lie to the south, which are walls and vaults of the ancients: and this they did as an eternal record. In a town that is the *encomienda* of my mother, called Tixhualahtun,⁵ that is to say, a place where is found one carved stone atop another: so that this town was like our archive of Simancas . . ." (*Informe contra idolorum cultores del obispado de Yucatan*, Mexico, 1892, pp. 96). And to make his idea better understood, Sánchez de Aguilar repeated on the margin of his book: "Tixhualahtun another Simancas."⁶

It is probably a "stela of Uxmal" that is referred to in the Book of Chilam Balam of Titzimin when it declares (p. 24): "*Uaxac ahau: uchci to Chichen ca DZIBATHI u yahau ah Uxmal ca tali un chakeb u pach Chac-Xib-Chac, tumenel Ah-Nacxit-Kukulcan*" (= "Eight Ahau: this is the time period where at Chichen, Chac-Xib-Chac was crushed by Ah-Nacxit-Kukulcan, as WRITTEN,⁷ by the prince of Uxmal").

Among the Tzental, Nuñez de la Vega (*Constit. Dioceses.*, No. 35) speaks to us also of a stela erected at Quixte (a quarter of Comitán, a city situated on the border of Chiapas and Guatemala), where a Tzental king, protector of the Calendar sign Been (or Ben), had ordered to make note the remembrance of his great deeds: "... he left written his name in the Upright Stone, that is a place that is in the town of Comitlán . . ."⁸

The Quichés also had the habit of raising stones (with inscriptions, no doubt, even if the texts don't say it) to commemorate the remembrance of their stay or passage in any place: "... they arrived at a place, called Chicpach: they lived there and left as a monument a large stone" (*Título de los Señores de Totonicopan*, chap. I, § 8, p. 14).⁹

In Yucatan, these Stelae that are raised every twenty years are called "katun," and this was also the name of the twenty year period.¹⁰

Different etymologies have been proposed for the word "katun." The most frequently accepted is the one that derives "katun" from "kal" (= count of twenty) and from "tun" (= tun). Instead of this "stone of the twenty-year period," we prefer "the stone that is questioned" (= *Kat tun*) or in other words "the stela that is consulted [to know of past events]."¹¹

During the Spanish epoch the information on some of these stones (notably those of Uxmal)¹² was picked out by literate natives, and transcribed into Latin characters. This is the origin of the chronologies that we find in most of the Books of Chilam Balam, chronologies that began with phrases analogous to these: "*Lai u tzolan Katun . . .*" (= This is the order of katuns);¹³ "*U kahlay u xocam Katunob . . .*" (= History of the count of Katuns . . .),¹⁴ etc. . . . The original meaning was probably this: "*List, put in order of the stelae of the city of X---*."

SYMBOLIC GLYPHS IN MAYA-QUICHE WRITING: THE SYMBOLIC GLYPH OF WAR

[*Revue des Études Maya-Quichéés* 1, no. 1: 23–27]

The idea of "war" in the Aztec graphic system was represented by arrows and a shield. We have a good example of such a representation in a manuscript from the Boban collection, now preserved in the Bibliothèque Nationale in Paris (Figure 35.1). The commentary in Latin letters that accompanies this (picture, scene, painting) is written: "Nechualocoyotzin Tetzoco, Ytzcohuatzin Tenochtitlan tlatoanicatca yehuantin quito-huaya yn mitoua yn teoatl yn tlachinolli yhuay Tlacopan yn Totoquihatzin, . . ." (The lords Nezahualcoytl [of Tetzoco] and Itzcohuatl [of Mexico] spoke arrows and shields together with Totoquihatzin [of Tlacopan] . . .).¹⁵ The expression "to speak arrows and shield" is equal to saying "to speak war."

In the *Histoire de la nation mexicaine*¹⁶ each time the Latin-style text mentions war, the scribe draws the glyphs "arrow and shield" (Figure 35.3).

Among the Aztecs of Mexico, in times of peace weapons were kept in the arsenals or *tlacochcalco* "house of spears": it is only during times of war that the people of this part of America were armed. "To make peace" is to put down the shield and let the arrow

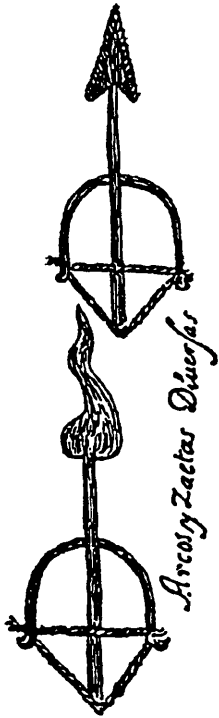


Figure 35.1. Guatemalan bows armed with their arrows (after Fuentes y Guzmán [1969–72])



Figure 35.2. In the center of the picture, the group to the left (two arrows) and the group to the right (an arrow and a shield) express the idea of war. (After an Aztec manuscript in the Boban collection)

rest.¹⁷ *Ca iniquac tzonquiz in necaliliztli in moman in chimalli; izceuh in teotl tlachinolli; inic poliuhque in Tenucheá Tlatilolca*, Cristobal del Castillo tells us in recounting the capitulation of Mexico City on August 13, 1521, that is to say, literally: “when the battle was over, then the shield was put down, and the war became cold, and thus the Mexicans and the Tlatelolcas were vanquished.”¹⁸

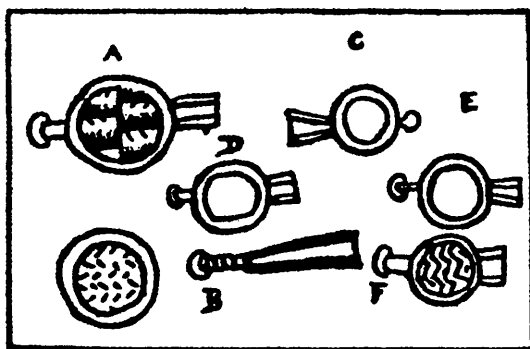


Figure 35.3. The glyph “arrow, shield” after the “History of the Mexican Nation.” In drawings A (page 35), C (page 62), D (page 69), E (page 70), the arrow and the shield are grouped. In B (page 38) the two weapons are left apart. The glyph signifies “war” in both cases.

The same expression in Chimalpahin: *Auh yn omotecac yn tlahuiztli, yn espada, yn omoman chimali, niman yhuac yn quincenallique tlahtoque Acachinanco* (“From the time that weapons were put down, the spears and shields, the chiefs met (were reunited) at Aeachinanco”).¹⁹

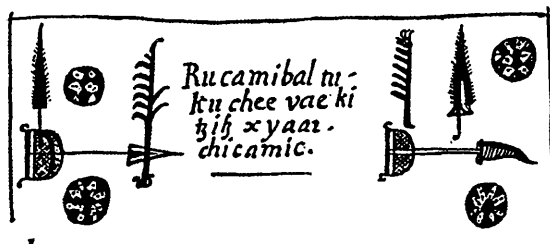
These expressions are also found among the Maya-Quiche: *chi ka vik kib chi chab, chi pocob* (“we will arm ourselves with arrow and shield”); *Vae cute qui molouic quib conohel amag, e cavutal chic chi chab, chi pocob conohel . . .* (“behold, then that all the tribes will join together armed with arrow and shield . . .”); *Ix-cotcomih chirih tinamit que ominic e vikeitalic chi chab, chi pocob . . .* (“they surrounded the battlements of the city, crying out, armed with arrow and shield . . .”), etc., etc.²⁰

Another passage from the Popol-Vuh clearly shows us that “shield” = “war”: *Ta ix-qui tih cut, ix-qu’iquizah pocob chiri chi Izmachi, ix-r’etal cut c’ahauarem ri: ta ix-qui bano ix-r’etal qui gagal, r’etal naipu qui nimal* (“but then they desired the shield to mark their power, there in Izmachi; they wanted it to prove their strength, to prove their greatness”).²¹

In another passage from the same work the term *pocob* (“shield”) is glossed with the word *labal* (= war): *Quehecut u vinakiric u puzic vinak chuva qabauil, ta ix-ban ri pocob [labal], u xe ta ix-tiqaric u pocobaxic tinamit chi Izmachi* (“Thus were born the human sacrifices before the gods, at the time that shields were taken up [that is to say war], the cause of the fortification of the city of Izmachi”).²² Actually, one could translate *Ta ix-ban ri pocob labal* as “then were made shields of war,” but it is likely that this would be a redundancy, and that it is better to consider *labal* as an explanation of *pocob*.²³

In one of its chapters, the work called “The Annals of the Cakchiquels”²⁴ speaks to us of a battle where the Tukuches were massacred: the scribe hastens to draw, like in Aztec manuscripts, the ancient glyphic signs of war: the arrow and shield (Figure 35.4).

In the *Book of Chilam Balam of Chumayel*²⁵ in the forecasts for “8 Ahau” (the years 1700 to 1720) we have the phrase: . . . *banban katunyah bin bel ta haci tumenel ah-otoch nalobe*. (= . . . many wars will be made by their inhabitants).



† Kign h pacatib uuxaonb chihulohuf ah xboz pe tikuchee gha ka
 a'namit, canixatan uux b'ah xughab'itun ahauf cap hunaf pu, vi
 k'imal chi'toof, chichunahuf sut. Chichunahuf gabul, chign'vach

Figure 35.4. A page of the manuscript “Annals of the Cakchiquels” [written in the Guatemalan town of Sololá sometime in the early seventeenth century and rediscovered in 1844 by Don Juan Gavarrete, who was reorganizing the archives of the monastery of San Francisco in Guatemala City], where the account of the struggle between the Cakchiquels and the Tukuches is recorded: The circles are stylized shields: The bows, armed with arrows, are easily recognized—the trees probably represent glyphically the names of their adversaries (face to face): Cakchequel (or tree, “che,” red, “cak”) and Tukuche (or tree, “che” of the *tuku* species).

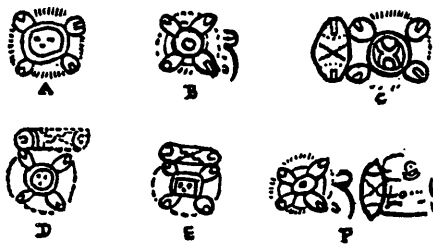


Figure 35.5. The “shield” glyph and “flint, shield” glyph (= war) in the Maya-Quiché manuscripts: A (Cortesianus, 17); B (Troano, 23); C (Dresdensis, 60); D (Peresianus, 3); E (Peres., 6); F (Tro., 23).



Figure 35.6. A page from the “Book of Chilam Balam of Chumayel”: the central personage represents “8 Ahau”; the dozen figures that surround him are the remaining twelve Ahaus of the cyclic series. Below, to the left, a shield (with leather straps that held it to the arm); to the right, a lance (or an arrow) whose shaft is in conjunction with “13 Ahau.” This last scene is frequently represented in the manuscripts. The text predicts the “numerous wars” that will be the lot of “8 Ahau.”

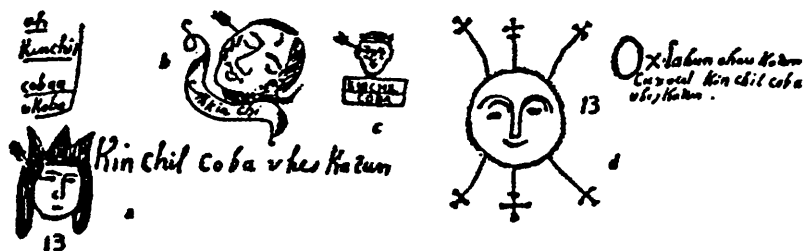


Figure 35.7. The god of "13 Ahau," Ahkinchil Coba, wounded by an arrow. (After Spinden 1924: 89)

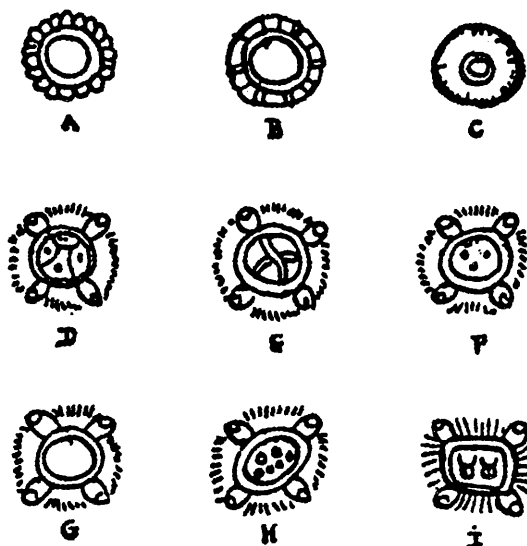


Figure 35.8. Maya-Quiche shields after several Precolumbian manuscripts: A (Dresdensis, 46); B (Dr., 50); C (Dr., 60); D (Dr., 66–67); E (Dr., 67); F (Cortesianus, 16–17, Troano, 14); G (Dr., 65–69); H (Tro., 25); I (Tro., 24).



Figure 35.9. The "flint" glyph (After Genet: *Les éléments primaires des glyphes mayas-quichés* [a privately published work])

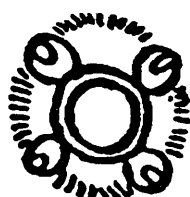


Figure 35.10. The "shield" glyph (After Genet: *Les éléments primaires des glyphes mayas-quichés*)



Figure 35.11. A page from the Dresden Codex (p. 60) showing scenes of war with the “flint, shield” glyph (above, third column, third glyph)

The scribe did not fail to gloss this phrase with an arrow (or a spear) and with a shield (Figure 35.6 and 35.7).

In Pre-Columbian manuscripts, to the expressions and glyphs employed by the Aztecs:

ARROW, SHIELD = WAR

the Maya-Quiches preferred:

FLINT, SHIELD = WAR

as shown by a consultation of the Dresden, Paris, and Troano codices (Figure 35.5, 35.8–35.10).²⁶

MAYA-QUICHE WRITING AND PHONETIC GLYPHS: PHONETIC GLYPHS AND THEIR USE

[Revue des Études Mayas-Quichéas 1, no. 2: 37–43]

The graphic system employed by the Maya-Quiche and the graphic system of the Mexicans were analogous in their principles and rested on the same basis:²⁷ a combination of pictures,²⁸ symbolic glyphs,²⁹ and phonetic glyphs.

The reading of these phonetic glyphs taught Sánchez de Aguilar that the Yucatecs gave to a certain plague the name "*Mayacimil*," to a period of famine the name "*Ocna Kuchil*," while a time of floods and hurricanes was termed "*Hunyecil*": ". . . They had books from the bark of trees with a white pitch, and stretching about 10 to 12 *varas* in length, that they doubled about a hand-span, and on these they painted with colors the count of their years, the wars, pestilences, hurricanes, floods, famines, and other events: *and from one of these books that I took away from some idolaters, I saw and knew that a certain pestilence was called Mayacimil, and another Ocna Kuchil, that is to say sudden deaths, and times in which the ravens entered the houses to eat the corpses. And the inundation or hurricane they called Hunyecil, the flooding of trees*" (Sánchez de Aguilar, *Informe contra idolorum cultores de Obispado de Yucatan*, 1639, Mexico, 1892, p. 95).

In Maya-Quiche writing, however rudimentary, as shall see at the end of this account, phonetic glyphs seem to also have been used to transcribe prophecies,³⁰ and incantations.³¹ But above all they were used to note proper names.

About this use the texts of the ancient chroniclers are categorical and leave no doubt: Las Casas [in his *Brevísima relación de la destrucción de las Indias Occidentales por los Castellanos*],³² speaking of the natives of the Campeche region,³³ tells us notably (on the subject of facts that happened about 1531–1536 upon the arrival of Jacob de Testera): ". . . Twelve or fifteen lords of many vassals and lands, each one gathering together their towns, and taking a vote, and consent, they submitted of their own will to the lordship of the Kings of Castille, receiving the Emperor as King of Spain for their supreme lord, and universal, *and they made certain marks like signatures*;³⁴ which I have in my possession with the testimony of the said friars."³⁵

Oviedo y Valdés (in his *Historia general y natural de las Indias*, Madrid, 1851–1855, vol. III, p. 246) also speaks to us parenthetically of the phonetic glyphs used to transcribe proper names; ". . . the beehive cylinder ("*vaso*"),³⁶ as I have said, is a chunk or piece of a hollowed-out tree, and leaving it complete like the box of a drum, and as thin, after working, as the small finger of the hand, or as they wish to leave it, and on the surface without bark and very well worked with reliefs and carved foliage *and each cylinder and beehive has sculpted the sign or mark of the lord, who is the beehive owner*."³⁷

In a certain number of ancient low reliefs, the individuals who are depicted wear on their arm or thigh some glyphic signs that are probably phonetic (see Figures 35.12 and 35.13 notably): one can presume that these inscriptions give the name of the said personages to indicate their city of origin.³⁸

Be that as it may, we have several ancient texts that show us the use of phonetic glyphs in writing the terms Kukulcan, Campeche, Zizontun, Amcan moo yk, Ahpop-

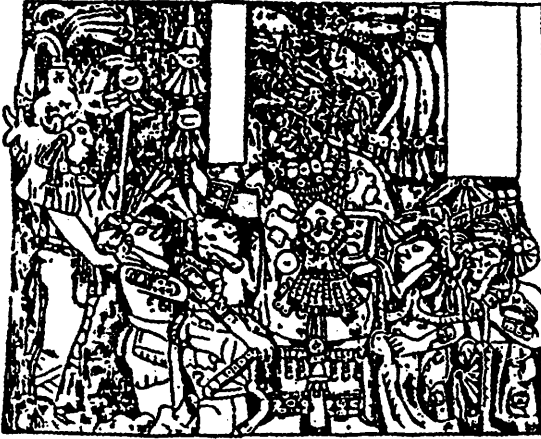


Figure 35.12. Low relief from Yaxchilan (after Spinden 1913): each individual carries, on the arm or in the thigh, his name or that of the city that he came from



Figure 35.13. Another low relief from Yaxchilan (after Spinden 1913): the vanquished warriors carry a glyphic inscription on the thigh, an inscription that probably gives their respective names

Zotzil, Kabul: their study will help us understand the function of a large part of Maya-Quiche writing.

DIFFERENCE BETWEEN THE GRAPHIC SYSTEM OF THE NATIVES OF CENTRAL AMERICA AND THE GRAPHIC SYSTEM OF THE EUROPEANS

[*Revue des Études Mayas-Quichéés* 1, no. 2: 59–63]

The examples that we have just given show that the Maya-Quiche rendered names with phonetic glyphs, following a system similar to that used by certain Shoshone-Aztec nations. It is to this syllabic writing that the ancient Spanish chroniclers were referring,

when they told us: "... they had letters with which they wrote and communicated, which were certain characters that each one was a part, and with this they communicated as we do with our letters . . ."; "... They had letters, that each letter was a syllable, and they communicated with them . . ."³⁹ It is also mentioned in native texts. In the *Prophecy of Ahkuil Chel* we find the following phrase: "... *Mac to ahkin, mac to ahbovat, bin toh alie u than uoohé?* . . ." (= . . . "but which priest, but which prophet will understand the voice of the characters? . . .";⁴⁰ that is to say, "who will be able to read the phonetic characters?").⁴¹

But in the set constituted by the tablets, the symbolic glyphs, and the phonetic glyphs that constitute the graphic system of the Maya-Quiche, the phonetic glyphs have always constituted a minority: these served only to denote words. The peoples of Central America, in fact, never attempted to reproduce, by the same art, verbs and their inflexions, and to thus transcribe ordered texts, complete texts in and of themselves. In reality, writing in America has remained extremely rudimentary, notably in comparison with the graphic systems of the Old World.

To better sum up and to make understood the difference between European (or alphabetic) writing and the writing of the people of Central America, let us define the former, "that it reproduces, that it records thought in its smallest details, that it suffices in and of itself and has need of neither pictures nor engravings nor images in order to be interpreted: that two different individuals, reading the same text out loud would pronounce the same words."

With regard to this, Maya-Quiche writing is only an imperfect and very imprecise way to note thought. It only indicates the skeleton, representing particularly material facts, whereas abstract concepts are noted by pictures or symbolic images that are more-or-less comprehensible, always subjected to the interpretation of commentators who would furnish the matching explanations in the group, but may differ in the details.⁴²

The Cunas of the isthmus of Panama still use today an analogous system⁴³ that has been explained and described very well by the explorer Erland Nordenskiöld. He tells us: "Each sorcerer-healer has his own personal manner of transcribing the pictographic signs that are only readable to himself and his disciples. Nevertheless, there is enough resemblance between the diverse documents that emanate from different origins that they are intelligible to every Indian who possesses some notions of pictography. Certain symbols are always the same. The sign that depicts the 'river' is always identical as well as the one that indicates the 'inferno' or 'the realm of demons.' There are very few Indians who are versed in this art: the sorcerer-healers themselves do not always practice this art."

"An Indian pictography serving to preserve the text of an incantation generally does not give it in its entirety. The images only represent the most important words . . . In examining, for example, . . . [a Cuna pictograph] . . . and reading from right to left at the top of the page we find the following figures: 1. River; 2. God; 3. House, which are followed by the names of three magic stones (4-6) and of five medicines (7-11), and so on. When an Indian sings the words of this incantation, what he will say will correspond to something like this: 'In the place where the RIVERS run, GOD has built a HOUSE for the good of all.' Then he continues by enumerating the MAGIC STONES, and the MEDICINES, etc. . . . Pictography only conveys the salient parts of the incantation, which must be completed by the memory of the one reciting . . . Since pictographic writing does not

give a complete rendering of the incantation or song that one wishes to preserve it is no less than a memory-aide, the utility of which we must not misunderstand."⁴⁴

All that has been said here about the Cunas and their graphic system could be applied without restriction to Maya-Quiche writing.

NOTES

1. Here there is an error by Diego de Landa; Most cities of the Yucatan possess stelae.
2. Diego de Landa himself says that he visited Don Juan Cocome (XI). Aguilar (*Informe contra idolorum*, p. 97, and *Colección de documentos inéditos* [2nd series, vol. XI, p. 264]) tells us of his relations with Gaspar Antonio Chi, grandson of Tutul-Xiu, king of Mani.
3. "... Bin thanac u dzibte u nak pake ..." (= "that which is written on the walls will speak ..."). Gordon, *The Book of Chilam Balam of Chumayel*, p. 65.
4. Oxumal (Uxmal) and Chichiniaza (Chichen Itza).
5. Or Tyxbalahtun, close to Tetzal (province of Peto) (*Relación de los pueblos de Tetzal y Temax*, p. 295, in *Colección de documentos inéditos*, 2nd series, vol. XI, pp. 292–303).
6. This passage was copied almost literally by López de Cogolludo, *Hist. de Yucatan*, bbr. IV, chap. V. The following text surely makes allusion to a Spanish inscription and not a Maya-Quiche inscription: "The one the Cupul Indians raised in Valladolid affirms, by a sign, that it was the year of 1546; this is in the house façade of a conquistador in that city" (Sanchez de Aguilar: *Informe* . . . , p. 91, in the margin).
7. "... among the native only the Priests and Kings, and their children knew how to interpret and paint their characters, and all the rest did not know more than that which was said to them: and thus they revered them more" (Lizana: *Historia de Yucatan*, part II, chap. V, § 3, p. 46).
8. This stela must have been analogous to the one that Franz Blom found at Comitan. See Blom and La Farge: *Tribes and Temples*, New Orleans, 1927, vol. II, pp. 421–24.
9. But the Maya-Quiche also erected stelae without inscriptions. Near Comitan, at la finca San Francisco, are found two pillars of this kind: the *pillars of Ben*. Brinton, *The Pillars of Ben* (Bull. Free Museum Sciences Art, University of Pennsylvania, 1897, vol. I, pp. 3–10). Blom and La Farge, *Tribes and Temples*, pp. 411–12.
10. "Sanchez de Aguilar": *Informe contra idolorum cultores del obispado de Yucatan*, 1613, Mexico, 1892, p. 96.—Katun: kind of twenty years (*Diccionario de Motul* . . . , edited by J. Martínez Hernández [Mérida, 1929], p. 500).
11. KAT. AH. AB. To ask, to question, and to inquire. *Diccionario de Motul*, p. 497.
12. These are probably the inscriptions of the stelae of Uxmal, Chichen Itza, and maybe Mayapan, that were noted by the native chronographers.
13. Book of Chilam Balam of Mani.
14. Book of Chilam Balam of Chumayel.
15. *Rapport à son Exc. M. le Ministre de l'Instruction publique sur un manuscrit de la collection Boban*, by Colonel Doutrelaine (in *Archives de la Commission Scientifique du Mexique publiées sous les auspices du Ministère de l'Instruction publique*, vol. III, Paris, 1867, pp. 120–133).
16. *Histoire de la nation mexicaine depuis le départ d'Azilan jusqu'à l'arrivée des conquérants espagnols (et au delà 1607): Manuscrit figuratif accompagné de texte en langue nahuatl ou mexicaine suivi d'une traduction en français par feu J.-M. Aubin. Reproduction du codex de 1576 appartenant à la collection de M. E. Eugène Goupil, ancienne collection Aubin*, Paris, 1893.—The translation,

or more precisely the essay at translation, is worth absolutely nothing.—For the “arrow, shield” glyph (= war), see pages 35-38-62-69-70-71-72-76-78-79.

17. In abbreviation, in glyphic writing as well as in conversation, only the image of “shield” (equals war) was frequently used.—“Arrow” is sometimes replaced by “spear,” or by “sword.”

18. León y Gama, *Descripción histórica y cronológica de las dos piedras*, Mexico, 1792, pp. 83–84, note 5.

19. Annals of Domingo Francisco de San Anton Muñoz Chimalpahin Quauhtle-huanitzin (sixth and seventh Relations 1258–1612), published and translated from the original manuscript by Rémi Siméon, Paris, 1889; pp. 194–195.

20. *Popol-Vuh, Le livre sacré . . .* (Brasseur de Bourbourg edition, Paris, 1861), 4th part, chap. III, p. 274, and chap. IV, p. 282.

21. Popol-Vuh, 4th part, chap. 3, p. 300.—In replacing the term “shield” with the word “war” we have: “but then, they desired war to mark their power, there in Izmachi; they wanted it to prove their strength, to prove their greatness.”

22. Popol-Vuh, 4th part, chap. 7, p. 302.

23. Even though the author could have wanted to distinguish *Pocob labal* (= the shield of war) from *Pocob ha* (= the Pillar of a house).

24. The manuscript of Annals of the Cakchiquels is kept at the museum of Pennsylvania in Philadelphia. Brinton (in *The Annals of the Cakchiquels*, Philadelphia, 1885) only published a part of the Cakchiquel text, without reproducing the vignettes of the chapters, which are not without interest, as one will realize from Figure 35.4. The part of the manuscript that is reproduced here corresponds to page 156 of the Brinton edition. The title “*Ru camibal Tukuchée vae kitzitz xyaar chicamic*” means “Massacre of the Tukuchés, all of whom were killed.”

25. G. B. Gordon, *The Book of Chilam Balam of Chumayel* (Philadelphia, 1913), p. 98.

26. We have shown in the article “Les éléments primaires des glyphes mayas-quichéés” that “flint” means by extension “spear” and “arrow.”

27. “. . . These [books] are painted on both sides with a variety of figures and characters (of the same kind as the Mexican Indians also used in their old times).” Avendaño, *Relación de las dos entradas que hizé a Peten Itza*, quoted in Means, *History of the Spanish Conquest of Yucatan and of the Itzas* (Cambridge, 1917), p. 141.

28. To distinguish divinities, warriors, and people from one another, the Maya-Quiches gave them either a different physiognomy or dissimilar attributes. In the *Relación de la ciudad de Valladolid* (Colección de documentos inéditos . . . , 2nd series, vol. XIII), p. 28, we have a text concerning the different appearance of the Yucatec divinities. “. . . There were idols of cultivation, idols of the seas, and many other kinds for each thing, different from each other by their figures . . .” López de Cogolludo and Núñez de la Vega, among others, have described the “graphic” aspects of a certain number of Maya-Quiche divinities: Lahun-chaam, Ahtubun, Ahhulneb, Teel Cuzam, Kakupacat, Ical Ahau, Chinax, Coslahuntux, etc.

29. As for a symbolic glyph, one could notably mention that of “war.” This sign is composed of a “flint” and a “shield.” See Genet, “Les glyphes symboliques dans l’écriture Maya-Quiché: Le glyphe symbolique de la guerre” (in *Revue des Études Maya-Quichéés*, vol. I, pp. 23–32); Genet, *Mélanges Mayas-Quichéés*, 1934 (Id., vol. I, pp. 68–71). The “royal function” was in Maya-Quiche writing represented by a crown (see the present article “VI: *Ahpop-zotzil*”). In the same graphic system, a lizard (or more likely a caiman, probably with a more mythological than real appearance) represented “earth” and also the “primordial

flood," if one is based on the following text: "... they had information about the creation of the world and a creator of sky and earth, and they said that no man was able to paint him as he was; they also had information of the fall of Lucifer and of the Flood—and that the world had been ended by fire and, in recognition of this, they performed a ceremony and painted a crocodile that signified the Flood and the earth . . ." (*Relación de la ciudad de Mérida*, p. 51, in *Colección de documentos inéditos* . . . , 2nd series, vol. XI, pp. 37–75).

30. "... the characters of their Prophets . . ." (Villagutierre y Sotomayor: *Historia de la conquista de la provincia del Itza*, Madrid, 1701, book. VI, chap. IV, p. 352, col. 2)—". . . the prophecies of their Ancient priests, and the Characters of their prophets . . . ," ". . . the meaning of the ancient prophecies they venerated in certain Characters . . ." (Elorza y Rada, *Historia de la conquista de la provincia del Ytza*, 1714 [Paris, 1930], chap. VII, p. 226, and chap. VIII, p. 232)—". . . They preserve today the prophecies (written with their ancient characters) . . ." (*Relación of Fuensalida*, in López de Cogolludo, *Historia de Yucathan*, book IX, chap. XIV, p. 507).

31. "... there are other kinds of snakes they call *cocob*, of three to four *varas* in length and as thick as a riding lance, that also are very poisonous, and, when they bite, blood seeps out all over the body and by the eyes, as the *taxinchan*, and Indians use the same remedy as for *taxinchan*, and anciently, in the time of their gentility, the Indians protected themselves from this poison with conjuring and enchantments, since there were great sorcerers and they had their books for such conjuring and enchanting, and these sorcerers, with the few words they said, enchanted and tamed these poisonous snakes, then grabbed them and took them in their hands without doing damage to anyone" (*Relación de la ciudad de Mérida*, 1579 [in *Colección de documentos inéditos*, 2nd series, vol. XI, pp. 66–67]).—The Cunas of the Isthmus of Panama are able to write manuscripts of which the content consists mainly of songs and incantations. They do not employ a single phonetic glyph, but use only mnemonic signs that give the framework of the text. See Nordenskiöld, *Picture-Writings and Other Documents by Néle, Paramount Chief of the Cuna Indians and Ruben Pérez Kantule, His Secretary*, Göteborg, 1928. This work was translated in French by Marquise de Luppé, under the title *Documents pictographiques et autres fornīs par Néle, chef suprême des Indiens Cunas et par Ruben Perez Kantulé, son secrétaire* (the translation that is quoted here is still unpublished): "The contents of these manuscripts [in Cuna picture-writing] consist primarily of song and incantations of the type that are used by socerer-healers, while caring for their sick . . ." Also see Nordenskiöld: *Picture-Writing and Other Documents by Néle, Charles Slater, Charlie Nelson and Other Cuna Indians*, Göteborg, 1930.

32. *Las obras del obispo D. Fray Bartolomé de Las Casas, o Casuas, obispo que fué de la Ciudad Real de Chiapa en las Indias, de la Orden de Santo Domingo*, Barcelona, 1646, p. 27 (vuelta)—28.

33. Antonio de Remesal, *Historia de la provincia de San Vicente de Chiapa y Guatemala*, Madrid, 1619, book V, chap. 6, pp. 241ff.

34. Compare with "... the sign and mark . . ." from the Oviedo y Valdés text, quoted hereafter.

35. "... They submitted of their own will to the Lordship of the Kings of Castille, receiving the Emperor, as the King of Spain, as supreme and universal lord, and they made certain marks, like signatures; which, with the testimony of the Franciscans, who were there, he carried with himself, the Bishop of Chiapa, Don Fr. Bartolomé de las Casas, support and defense of these Indians, when he went to Spain . . ." (Torquemada: *Monarquía Indiana*, book XIX, chap. XIII).—It would be interesting to find this "subjection treaty," for we

probably have there, partly in the glyphs, the proper names used by the native chiefs, and partly in the transcriptions in Latin writing, the bilinguals that we are missing in order to decipher the Yucatec inscriptions.

36. This passage from Oviedo concerns the lives of the inhabitants of Chitemal (Chectemal), a city on the east coast of Yucatán.

37. The “sign” (*señal*) or “mark” (*marca*) of the lord was surely his name in phonetic glyphs. Oviedo’s expressions remind those of Las Casas : “. . . and they made certain marks like signatures . . .”

38. The ancient chroniclers speak to us of inscriptions that one would draw on one’s skin: “. . . they say that among the twelve priests of Mayapan there was one very wise that had only a daughter who married with a noble youth, called Achchel, who had children that were called like their father, according to the custom of the land, and they say that this priest told his son-in-law about the destruction of this city, and that this one knew much about the learning of his father-in-law, whom they say wrote certain letters in the flat part of his left arm of great importance so that he could be esteemed . . .” Diego de Landa, *Relación de las cosas de Yucatan* (Genet edition), vol. I.IX, p. 88—. . . *Uooh-puc u kaba. Lay dzitabi “uoo” tu tan u kab; ca dzibitabi “uoo” yalan u cal; ca dzibitabi tu tan yoc; ca dzibitabi yehil u ppuc u kab, ti Ah-Uooh-Pucil* (Uooh-Puc was his name, and his name “Uooh” was written in the center of his hand; and his name “Uooh” was written in the center of his gorge; and his name was written in the center of his foot; and his name was written in the fat of his arm, his name of Ah-Uooh-Pucil). Gordon, *The Book of Chilam Balam of Chumayel* (Philadelphia, 1913), p. 3.

39. *Colección de documentos inéditos*, 2nd series, vol. XI, *Relaciones de Yucatan*, Madrid, 1898, pp. 52 and 149.

40. An analogous phrase in the prophecy of the priest of Cauichen Mani: “*mac to ahbovat, mac to ahkein bin tohol cantic u than uoo lae?*”—According to the native Yucatec conceptions, when the priest reads a phonetic character, it is really the character itself that speaks through the intermediary of the priest. In fact the characters (and by consequence the inscriptions) have a personal, magical life: They can (and this is attributed more particularly to glyphs with an anthropomorphic or animal form) animate themselves, come down from the stelae where they are engraved, and mingle, in certain cases, with the lives of men. Like the statues, the characters serve as receptacles for a divine principle or a mysterious magical force. Also, regarding statues, the first duty of an invader is to break the stelae of the conquered land, or to hammer out the inscriptions, in such a way as to kill the divinity that is enclosed therein; or at least to deprive it of a “repository.”—“*Tii to ca bin thanac u dzibte u nak pake*” (That which is written on the walls will speak). Gordon, *The Book of Chilam Balam of Chumayel*, p. 65.

41. The term “uoo” is applied particularly to phonetic glyphs. Compare with the quote cited . . . [in note 38 above]. The painting itself, the picture, was designated by the term “dzib.”

42. The following text is written in European writing: “*The 8 Ahau, Na-Cham-Uc, offered to Itzamna 10 gold necklaces and an abundance of poultry.*”

In Maya-Quiche writing one can only transcribe the following words:

8 Ahau	Na-Cham-Uc
Itzamna	10 necklaces
gold	Poultry

The skeleton of the transcribed text in European writing, which from that point on could receive several different interpretations (notably: "Na-Cham-Uc was killed by Itzamna, who took from him 10 necklaces," etc.). In order to reduce the field of possible interpretations, the Maya-Quiche scribe would complete his text with a picture representing, for example, Na-Cham-Uc, bringing these gifts to the feet of Itzamna, as an offering.

43. "According to Néle, it was the great civilizing hero Ibeorgun, whose reign goes back 800 years, to whom is attributed the invention of pictography. Néle confirmed to me also that 'pictographic writing that the Indians currently use is not as good as that which was used in times past.' The last scribe who possessed the true practice was Mémékina. These traditions all relate to the great antiquity of this kind of writing . . ." Nordenskiöld, *Documents pictographiques et autres fournis par Néle, chef suprême des Indiens Cunas* . . . (unpublished translation by Mme de Luppé).—Since Nordenskiöld's trip to the state of Panama dates to 1927, the reign of Ibeorgun is placed around 1127.

44. Nordenskiöld, *Documents pictographiques et autres, fournis par Néle, chef suprême des Indiens Cunas Rubens Perez Kantulé* (unpublished translation by Mme de Luppé) § III, *La pictographie des Indiens Cunas*.—The following description of the Cuna manuscripts, originating in the same work, is equally important:

"Certain little details have their meaning. It is thus that a little yellow point over an image that represents the drawing of a sickness shows that this sickness is going by 'the path of the sun.' If there is the representation of a boat, this signifies . . . [that] the 'sun's boat is found therein,' and this denotes that the demon of the sickness in question travels in the 'vessel of the sun.' If, for example, there are four little lines above a drawing, this is the symbol of a demon living in the fourth of the eight layers of which the earth is made."

"I have already spoken of medicinal plants that are described in the manuscripts. As for animal depictions, they are generally demons, and are ordinarily rather poorly drawn. Above all one sees this in the serpents that play a large role in the incantations. Other animals that are most frequently encountered in these pictures are alligators, frogs, fish, scorpions, crabs, and poisonous ants. Among the birds most often represented, we find the species that destroy snakes and eat them. There can also be seen drawings of mammals (who are, properly speaking, demons), but they are ordinarily less well reproduced than fish and insects. As a general rule the animals have their heads turned in the direction of the reading of the pictographic manuscript."

"Human figures almost always represent demons. They are frequent, even though they are often barely even sketched. By the side of very small personages, one can see in certain manuscripts a certain number that are very large and generally go in couples. They are habitually clothed in a sort of jacket or shirt, shorts (culottes), and sandals. They sometimes wear a cloak, and often they are seen with large ornaments of feathers on their heads, a type of headdress at one time very common among the Cunas, but which in our day has completely disappeared. Nevertheless, the Indians maintain that these figures are not part of the pictographic writing: 'It's the same thing as the vignettes on your books,' an Indian who once lived in Panama has told me."

“El glifo ‘emblema’ en las inscripciones mayas” *and* “Glifos nominales en el sarcófago de Palenque: Un ensayo”

Heinrich Berlin

The two articles that follow were the first to pose a serious challenge to then-prevailing ideas about the nonhistorical content of the Classic Maya texts. In his laconic and very direct style, Berlin observed that certain glyphs, recognizable by their association with particular affixes, tended to be restricted geographically to specific sites. Departing from traditional interpretations, he proposed these might have been the actual names of cities, their tutelary deities, or their ruling dynasties. It was this conceptual breakthrough that made his paper original and challenging.

Berlin found support for his ideas in parallel research by Proskouriakoff, whom he cited in his second article, although she had yet to publish her article on historical patterns at Piedras Negras (Proskouriakoff 1960). By this time, Berlin appeared more secure in his identification of the figures carved in the Palenque sarcophagus as human beings and, more to the point, as actual historical personages. Again, his methodology was not entirely innovative—quite to the contrary, it resembles Schellhas’ (1897) identification of deities in the codices in recognizing the consistent association between discrete iconographic entities and particular groups of glyphs. It was novel conceptually, however, and represented, along with Proskouriakoff’s findings, the beginnings of the historicist paradigm in Maya research.

“EL GLIFO ‘EMBLEMA’ EN LAS INSCRIPCIONES MAYAS”

Although the Maya appear as a well-defined unit relative to other Mesoamerican cultures, it is no less true that Maya cities are quite distinct from each other. These differences range from the varying design of buildings to the outlines of hieroglyphs. Here I wish to add a new, previously unnoticed element to this list: a special and exclusive glyph for each city. For want of a better term, I will call this sign an Emblem glyph. It consists of a combination of the following: a main element, which varies according to the city,

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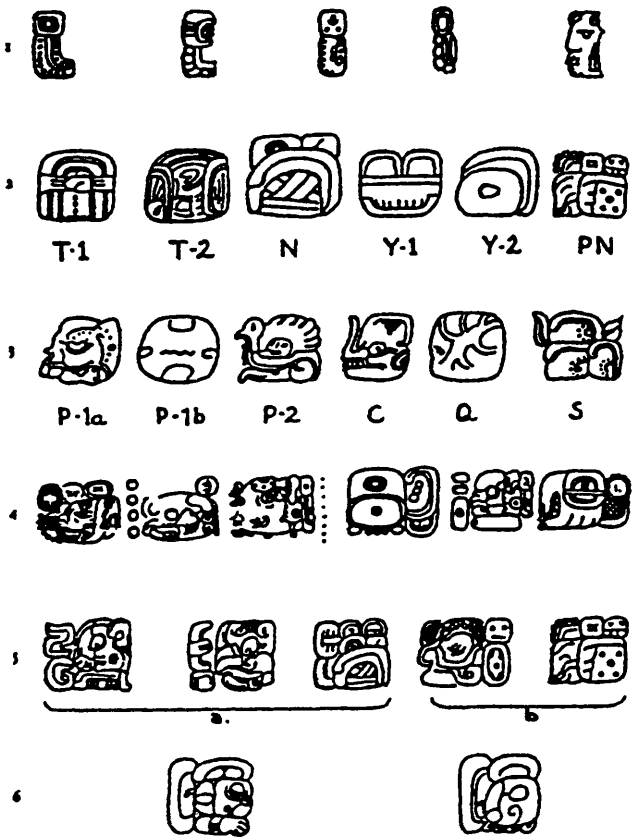


Figure 36.1. Emblem glyphs in the inscriptions: (1) some common prefixes in the Emblems; (2) Emblems of Tikal, Naranjo, Yaxchilan, Piedras Negras; (3) Emblems of Palenque, Copan, Quirigua, Seibal; (4) clause from Tikal; (5) a, clause from Naranjo Stela 23, and b, clause from Piedras Negras Lintel 3; (6) two glyphs from Palenque, Temple of the Inscriptions

and two constant affix groups, including (1) the so-called Ben-Ich superfix, and (2) a prefix that Eric Thompson (1950: 276) considered to be aquatic (Figure 36.1). Thompson himself (1950: 276, 278) established that this group could include the head variant of numeral nine, that is, the head of the so-called Chicchan god. The use of this head as a prefix for the Emblem is very ancient, appearing as early as on Stela 23 at Tikal (9.4.0.0.0). From Bonampak Stela 2 it seems that there are other heads involved besides that of the Chicchan god. In this preliminary study these prefixes are considered to be equivalent, although each certainly represents a different nuance of a more general expression. In the future, it should be determined separately whether the main element, isolated or combined with other elements, might in some cases—certainly not always—have the same Emblem value, as well as whether small affixes might modify the main element's meaning. In this article we can only refer to the glyph in general terms, acknowledging that the sign is susceptible to further, more refined analysis.

We still do not know the exact significance of Emblems. They seem to refer to something closely linked with each place, perhaps the names of the localities themselves, a tutelary deity, a dynasty, etc. Some large cities have as many as two Emblems. And in the case of Palenque, one of its two Emblems has two variants, a head variant and normal or symbolic variant. The presence of the Emblem of one city in the inscriptions of another, an altogether infrequent event, proves there was a relationship between the two. In this way, Emblems show promise for breaking the barrier of the non-calendrical glyphs and for opening research into Maya geography.

Emblems are found usually, although not exclusively, in clauses (by clauses I mean combinations of two or more glyphs that occur at least twice in texts). Again, these clauses are typical for each city. However, an intimate relation is often evident with "Ben-Ich" katuns, that is, katuns with numerals that seemingly do not have the usual chronological significance. In many instances Emblems are followed by a glyph formed by two Imix elements; in others, Emblems or their constituent clauses precede Secondary Series (also known as Distance Numbers). Doubt remains as to whether the non-calendrical expressions refer to the anterior or posterior date, supposing that these clauses do indeed relate to such dates. Since Emblems or their respective clauses frequently end an inscription, it would seem likely that the connection is with the anterior date.

In our study of Emblems we must confine ourselves to the cities published half a century ago by Maudslay and Maler, since these are the only authors to have presented the glyphic material in an adequate manner. Notwithstanding the many inscriptions discovered since then, only a few have been published in a way useful for glyphology. Good drawings are completely missing, and available photographs leave much to be desired. Despite progress over the last half century, students of glyphs confront an appalling setback because of methods of publication. If asked to choose between, on the one hand, Maudslay and Maler, who, canteen on belt, got into the jungle on muleback and stayed there for months at a time, and, on the other, modern archaeologists of airplane and refrigerator, the student will not vacillate: he will stay with the former.

With these general considerations in mind, let us review the situation in different Maya cities with respect to their Emblems.

TIKAL

At Tikal there are two Emblems. The first (T-1, Figure 36.1, line 2) persists throughout the history of the city, appearing from the earliest inscriptions up to the last, that of Stela 11. In late inscriptions, the parallel lines in the fringe of the glyph are accentuated, giving the aspect of an open frame. The same T-1, but without affixes, appears also in the headdress that supports the main figure in the southern side of Stela 1 (Maler 1911: plate 13, 2) and in the headdress on which the tied slave of Altar VIII rests (Morley 1937-1938, I: Figure 19).

Another Emblem is present during the Middle Period, from 9.14.0.0.0 to 9.16.0.0.0 (T-2, Figure 36.1, line 2) although T-1 continues to be used. T-2 is the face of an animal covered with numerous parallel strokes that are characteristic of T-1, although arranged in a different way. Thus, these signs might actually be a single Emblem, T-2 being the

head-variant and T-1 the normal or symbolic variant. Both may occur simultaneously in the same inscription, as well as alternate in clauses.

There is a short clause, older and somewhat indistinct, and another very clear version on Stelae 19, 21, and 22 (Figure 36.1, line 4). As may be seen, this last clause contains the 4 katun glyph. In a previous publication (Berlin 1951: 53), I have called these “idle” katuns, which are neither Secondary Series nor anniversaries. A study of all the “idle” katuns in the Tikal inscriptions shows:

- (a) They are intimately associated with a very specific glyph consisting of a face in whose rear part there is a hand carrying an axe. In Maya, the cacique (or chief) is called a Batab, from *baat*, or “axe”; for this reason I wish to designate “idle” katuns as Batab katuns. The association between the Batab and the katun is so close that in some cases, as on Tikal Lintel 3, H9, the Batab substitutes clearly for the usual katun head.
- (b) All Batab katuns have a coefficient of 4, the exception being the example on Stela 16, which has a coefficient of 3. This sole exception corresponds to a stela whose contemporary date is 9.14.0.0.0; those signs with the coefficient of 4 occur in inscriptions dated between 9.15.5.0.0 and 9.18.0.0.0. It seems suggestive to think that periods of Batab katuns at Tikal might possibly have been used every 5 calendric katuns; thus, the 3 Batab katun would end in 9.15.0.0.0, to be followed by the 4 Batab katun. Tikal inscriptions prior to 9.14.0.0.0 contain nothing to disprove this theory, while they do have some feeble points in its favor. Given the archaic graphics of the earlier monuments, a true reading of the glyphs tends to be difficult.

Because the great inscription of Temple VI has a combination of T-1 with 4 (Batab?) katuns at position K4-L4, I believe this inscription should be placed in the proposed 4th Batab katun period. In my earlier study (Berlin 1951: 52), I had suggested the temple could date to 9.16.5.0.0. There is agreement, then, between my former supposition and the present one.

NARANJO

In analyzing the inscriptions of Naranjo, Morley (1937–1938, II: 21–165) noted that the texts could be divided into three groups, falling approximately within the following Long Count dates:

- (1) 9.9.0.0.0 to 9.10.10.0.0
- (2) 9.13.10.0.0 to 9.14.15.0.0
- (3) 9.17.10.0.0 to 9.19.10.0.0

The second group is separated from the other two by considerable time spans—50 to 60 years. Although our focus is completely different than Morley’s, which concerned dates alone, we nevertheless find proof for this grouping of dates. In the inscriptions

of the first group there is no Emblem whatsoever; true, there are few inscriptions from this time, but they include the important hieroglyphic stairway. Beginning with the second period, a particular Emblem emerges (Figure 36.1, line 2), which persists until the last inscription at the site. In this second period the Emblem is found very frequently within a special clause (Figure 36.1, line 5a) that has bonds with the more ancient one of Tikal, although it also occurs in other contexts. The T-1 Emblem from Tikal appears as well in this second period, mainly in the long clauses of Stelae 24 and 29 (Thompson 1950: Figure 3, 3–9); at the same time, these stelae contain, with one instance on each monument, the clause just alluded to along with the typical Emblem of Naranjo.

The available illustrations do not allow us to confirm whether T-1 appears in the third period. It may occur on Stela 19 (9.17.10.0.0), among other places. Both this stela and the contemporary Stela 13 still display strong glyphic links with the second period, while they introduce new elements that are typical of the third period. After 9.17.10.0.0, these older features disappear completely. To give an example, the clause in figure 36.1, line 5a still occurs in the above-mentioned Stelae 13 and 19; thereafter, a less precise clause appears, part of which is a glyph with an elbow in the upper right-hand corner.

The search for an Emblem in the inscriptions has also provided evidence to rectify a Long Count proposed by Morley: that of Stela 26. Only four fragments of glyphs remain, but the first three are components of our clause (Figure 36.1, line 5a) that occurs, as we have seen, between 9.13.10.0.0 and 9.17.10.0.0. The only notable difference is that the Emblem has a strange postfix. Morley had tentatively placed this stela at 9.10.0.0.0, that is, within the first period. Since I do not know of any Emblem, much less the alluded clause, within the first period, Stela 26 should correspond more probably to the second.

YAXCHILAN

This city has two Emblems: Y-1 and Y-2 (Figure 36.1, line 2). Y-1 appears in the most ancient inscription at the site (Stela 27), but since many of the glyphs on this monument are destroyed, we do not know if Y-2 might be equally old. Although each Emblem can appear independently, in the majority of cases they are juxtaposed; normally Y-2 comes first, followed by Y-1, but the reverse order also occurs.

The Emblems figure mainly in a long clause isolated by Thompson (1950: 46, 10–16). Prominent here are Ben-Ich katuns with coefficients of 3 to 5, although there is a dubious case with 7 and another with 2. Equally prominent is a jaguar head with a shield or bird prefix and a glyph with Ahau or Cauac as main element. There is an easily discernible correspondence between the glyphs, as can be seen in the list below:

Ben Ich katun	Jaguar	Glyph compound
Coefficient 3	Bird prefix	Cauac
Coefficient 4 or 5	Shield prefix	Ahau (or a substitute)

This relationship occurs almost without exception; in fact, the few possible exceptions might result from the incompleteness of the inscriptions in which they appear.

When the glyph that we have called Batab in the Tikal inscriptions appears at Yaxchilan, it is precisely in this clause—that is, it is related again to the “idle” katuns, although in Yaxchilan the association is not as palpable. Frankly, I do not understand the factors conditioning Ben-Ich coefficients at Yaxchilan. The explanation proposed for Tikal is surely not valid for Yaxchilan, but it should be noted that many of the Yaxchilan inscriptions have yet to be placed firmly in the Long Count, since the discrepancies between the dates proposed by Morley (1937–1938) and Proskouriakoff’s dates (1950) are notable. It is precisely through these non-calendrical clauses that ambiguous or dubious inscriptions may be dated, as has been successfully done by Thompson (1952b).

The study of our clause by itself shows that, in many cases, the text is irregularly distributed in the inscriptions decorated with figures; the free spaces are filled with glyphs enclosed by a frame, and the contents of each frame have an independent value of their own. It is also interesting to point out the importance of the jaguar and the bird at Yaxchilan, made apparent by the following examples: (a) a large jaguar head sustained by one of the characters in Lintel 26; (b) the descending birds over the staffs held by the characters of Lintels 2 and 5; and (c), last, the appearance of Emblem Y-1 in the head-dress of the great mask in the lower part of Stela 4.

PIEDRAS NEGRAS

The typical Emblem of Piedras Negras and its equally distinctive prefix can be seen in Fig. 36.1, line 2. It appears with great frequency in a clause with at least two glyphs (Figure 36.1, line 5b)—I say “at least” because in some cases the minimal clause is part of a larger one. In addition, there appear several Emblems that seem to be non-foreign variants, since at least one of them forms part of the above-cited clause in Stela 36, the earliest with a secure Emblem.

At Piedras Negras, Ben-Ich katuns are always placed very close to an Emblem. The numerals of these Ben-Ich katuns seem only to be 3 and 4, but since some are rendered in head variants, there might be room for doubt. I have not found a rule governing the coefficients.

At K1 in Lintel 3, Yaxchilan’s Y-1 Emblem appears clearly with its regular affixes. The glyph at J2 that immediately precedes it is a jaguar head, familiar from the Yaxchilan clauses. Hence, it seems that the inscription of Lintel 3 makes reference to the neighboring city.

In passing, I wish to point out a distinctive feature of Piedras Negras epigraphy. Thompson (1950: 160) had found that in Distance Numbers or Secondary Series uinals have three to four peculiar hooks as suffixes. Now, in the case of the uinal on Altar 2, I2, these hooks are replaced by a kind of paw or foot (misdrawn in Fig. 36e in Morley 1937–1938, V, 1). In the same way, on Stela 23 the uinal at H8 has the same foot or paw as postfix, and it seems the same happens at S1 in Lintel 3. Outside Piedras Negras I remember two similar cases: the uinal of hieroglyph I6 in Copan Stela J and that of the

inscription on a vase from the Bliss collection, where this foot or paw substitutes for the regular hooks of the uinal. It seems, therefore, that the hooks and foot (?) denote the same idea or very close ideas. There are other glyphs that can carry the same hooks as suffixes, and in those cases they also alternate with the foot (?), as demonstrated by the great tablets from the Temple of the Inscriptions at Palenque (Figure 36.1, line 6). It is suggestive to think that these expressions denote the concept of making distances apparent, as much in time as in space (to run?). The same foot (?) still appears under an inverted Ahau at J1 in Piedras Negras Lintel 3, placed in a glyphic expression that contains the Emblems of Piedras Negras and Yaxchilan.

PALENQUE

Two Emblems can be distinguished: a face with deathlike aspect, P-1a, or its normal or symbolic variant, P-1b; and an animal face, P-2 (Figure 36.1, line 3). They appear in short clauses made up of two or three glyphs. These clauses are quite variable, showing more than 10 variants. The same Palenque Emblems appear also in the inscriptions of nearby places, such as the so-called Jonuta Stela 1 (Kélemen 1946: plate 78b), in the Miraflores tablets (Berlin 1955: Figure 5), and in the inscribed shell from Simojovel, presently exhibited in the Regional Museum at Tuxtla Gutiérrez, Chiapas.

COPAN

Its Emblem shows the face of a bat, Zotz, sporting a Cauac in the ear region. In addition, in almost every case it shows a suffix or postfix that looks like a double hook. In spite of the abundance of inscriptions at Copan, the Emblem is proportionally infrequent, appearing only in short and variable clauses. In this respect, Copan resembles Palenque, whereas both cities are different from the others mentioned before.

On the other hand, Copan has the most interesting inscription for the study of Emblems: Stela A, whose contemporaneous date is 9.15.0.0.0 according to Morley (1920: 221). Between D4b and D6a, it shows the coats of arms of Copan, Tikal, another place unknown to me, and Palenque. The glyphs of the three last places have suffixes that do not usually appear in their inscriptions. Similarly, the Copan Emblem lacks the above-mentioned hooks. Surely glyphs D2b–D4a should be read together with these Emblems: they consist of four glyphs, each with a coefficient of 4 and the same suffix. It seems suggestive to associate the Emblems with glyphs D8a–D9b. D8a is the West, D8b the East; consequently, to get the four cardinal directions, D9a could be South, and D9b, North.

QUIRIGUA

Quirigua also has a typical Emblem (Figure 36.1, line 3). I have not been able to identify a distinctive clause. The Copan Emblem is almost as frequent as the local Emblem, although at Quirigua it lacks one of the prefixes it should carry according to our initial definition; here, the prefixes are completely different.

OTHER PLACES

Aguas Calientes. From Morley's drawing of Stela 1 (1937–1938, V, 1: plate 18f), there appear to be Emblems in its inscriptions. Today the Emblems are eroded, preventing the identification of the main element.

Bonampak. There are several different Emblems in the inscriptions of Stelae 1 and 2 (Ruppert et al. 1955: Figures 18 and 19), a situation that makes it difficult to identify the typical Emblem of this place. Glyph I3 in Stela 2 is clearly Emblem Y-1 from Yaxchilan, with its prefix—a head variant—at H3. This head is surely not that of the Chicchan god, and must be instead the anthropomorphic variant of one of the various prefixes found with Emblems.

Ixlu. Emblem T-1 of Tikal appears in the altar of Stela 2 (Morley 1937–1938: plate 159a).

Motul de San José. Two Emblems appear in the few inscriptions of this site (Morley 1937–1938: plate 45d, e).

Naachtun. Morley's illustrations of Stela 10 (1937–1938: plate 41e and 151e) show an Emblem whose main element is somewhat effaced, allowing us only to assert that it is a head. Its prefix is also a head variant.

Pusilha. An Emblem can be seen in the photograph of Stela M (Morley 1937–1938: plate 164, c), again with a main element that is barely distinct.

Seibal. As at Bonampak, there are quite varied Emblems, of which the triple Cauac seems to be typical (Figure 36.1, line 3). Among the four Emblems of Stela 10 (Maler 1908b: plate 8) one is the triple Cauac, another is T-1 from Tikal, then comes what seems to be the same unidentified Emblem of Copan Stela A, and finally, another with an Ik as main element, which occurs also at Motul de San José.

Finally, I wish to call attention to the fact that in some instances the inscriptions of the largest cities show completely atypical Emblems, which might be references to unidentified places.

“GLIFOS NOMINALES EN EL SARCÓFAGO DE PALENQUE: UN ENSAYO”

In his most recent publication, Alberto Ruz (1958a) finally brings to light the remainder of the illustrations of the sarcophagus he found in the secret chamber or crypt inside the Temple of the Inscriptions, Palenque, Chiapas. Interpreting this rich material correctly will provide work for many researchers for a long time. In this article, we will only explore the possibility that some of the hieroglyphs sculpted in various parts of the sarcophagus might be names. For the sake of brevity, it is assumed that the reader is familiar with Maya writing and, especially, with the books of Thompson (1950) and Zimmermann (1956). When the latter is cited, the reader should be aware of the graphic differences between codices and inscriptions.

Four zones of glyphs on the sarcophagus can be clearly distinguished: (1) the upper face of the cover slab; (2) a chronological band distributed over the four sides of the cover; (3) the four sides of the sarcophagus itself; (4) the four supports of the sarcophagus. As

will be seen, zones 1 and 4 have a close relationship; the same can be said about zones 2 and 3. Consequently, we will describe them according to these affinities. The corresponding illustrations may be examined in Ruz’s publications (1955, 1958a).

The great cover slab shows an elaborate symbolic scene surrounded by a frame. In the lower (South) fringe, there are three human heads placed within medallions, with a glyph to either side of each medallion. The center medallion, with its pair of glyphs, is clearly separated from the other two by thick bars. Similarly, the upper (North) fringe shows three human heads within medallions, which are smaller than those on the lower fringe, and are not separated by bars. Accordingly, the two glyphs of each of the lateral faces are smaller and are placed upon one another. Only those of the central face are placed to either side. Thus, a pair of glyphs corresponds to each head. We will designate each head and its respective glyphs according to their position (N, NE, etc.). A schematic presentation of their analysis follows:

Medallion	Features of the Head	First glyph	Second glyph
NW	Turban, flower earspool	<i>Cauac</i> and prefix 41	<i>Sui generis</i>
SW	Turban, flower earspool	<i>Cauac</i> and prefix 41	<i>Sui generis</i> , probably a variant of that in NW
NE	Turban, disk earspool	“Seating” compound	Pseudonumeral and indistinct main element
SE	Hair, flower earspool	“Seating” compound	Pseudonumeral and God C with suffix
N	Hair, disk earspool	3 elements including prefix 20 (?)	Pseudonumeral and God C with suffix
S	Hair, flower earspool	3 elements including prefix 24 (?)	Pseudonumeral and God C with suffix

From the preceding table, it can be seen that the glyphs corresponding to the NE and SE heads are almost identical, and the same is true for the NW and SW heads. On the other hand, those of heads N and S show a significant difference in the prefixes of the first glyphs: 20 (?) in glyph N, and 24 (?) in glyph S.

The four supports of the sarcophagus again show human heads with their respective glyph pairs. Heads are sculpted in the S and N faces of the supports, whereas glyphs are placed in the E and W faces. The following results are obtained from the same type of descriptive analysis made before:

Support	Features of the Head	First glyph (upper)	Second glyph (lower)
NE	Turban, flower earspool	<i>Cauac</i> with 3 dots	Identical to NW in table above
SE	Turban, disk earspool	“Seating” compound	Pseudonumeral and God C with suffix
NW	Hair, hanging earspool	3 elements including prefix 20 (?)	Pseudonumeral and God C with suffix
SW	Hair, flower earspool	3 elements, indistinct superfix	Pseudonumeral and God C with suffix

It seems possible that the NE glyphs show some carelessness on the part of the sculptor, since prefix 41 is quite similar to 3 dots. The same negligence occurs in the upper glyph of SW, which even appears to be unfinished.

Of the ten pairs of glyphs studied so far, there are some that might be considered identical, that is, within the standard range of variation in Maya writing:

- 2 identical pairs linked with the North (cover N, support NW)
- 2 identical pairs linked with the South (cover S, support SW)
- 3 identical pairs linked with the E (cover NE, SE, support SE)
- 3 identical pairs, twice linked with the West, and once with the East (cover NW, SW, support NE)

To preserve symmetry, we might have reversed the inscriptions of supports NE and NW, but the Maya probably wanted to maintain North and South in a visibly opposed position. The heads associated with these glyphs generally differ according to placement, although several discrepancies have yet to be explained. Nevertheless, I believe the coincidences are enough to suspect an intimate connection between each head type and its corresponding glyph pair, as well as some relationship between each head-plus-glyph-pair combination and the cardinal directions. However, the glyphs that somehow seem to be associated with the four directions are certainly not those known from the codices or stone inscriptions. In this case, the association seems to be more specific, and not of a general character.

The four sides of the sarcophagus itself display the upper bodies of ten human figures that emerge from a band marked with *Caban* symbols. There are three on the East side (labeled E1, E2, and E3, from left to right), three on the West side (W1, W2, and W3), two on the South side (S1, S2), and finally, two on the North side (N1, N2). Each individual is associated with two glyphs, excepting the central characters on the East and West sides (E2 and W2), who are associated with four glyphs each (see Figure 36.2).

The last glyph in each set seems to be similar in the nine cases (it is missing only in W1). This is the glyph I identified in an earlier work (Berlin 1958) as “Emblem P1” from Palenque. It consists of a funerary element, the so-called *Ben Ich* superfix, and a prefix from Thompson’s water group. In S1 and N2, the funerary element is a fleshless jaw,

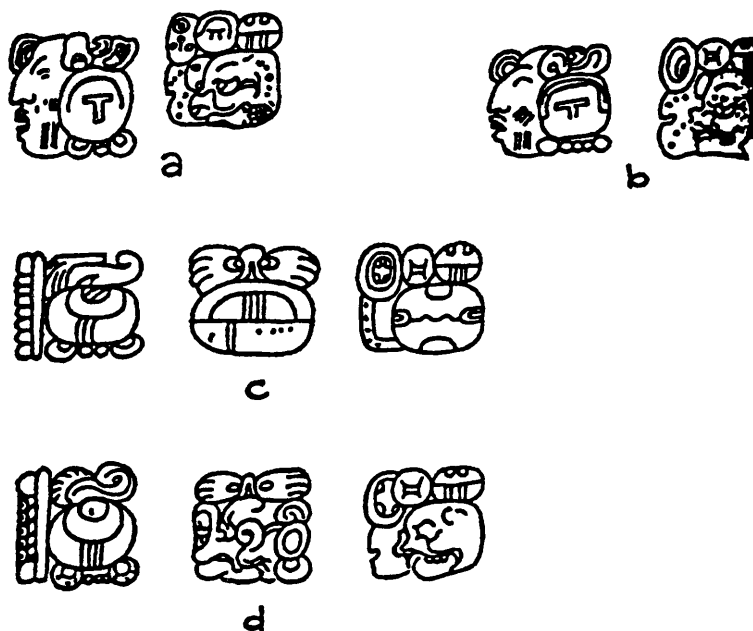


Figure 36.2. Clauses on Tablet 1, Temple of the Inscriptions, Palenque

and in place of the usual prefix, it carries a lunar postfix. Apparently, the prefix is missing also in sets E2 and W2, although in these two cases it shows up as a prefix for the God C head in the preceding glyph. There is a parallel example on Quirigua Stela A, glyph 36, which shows the God C glyph placed between the water prefix and the rest of the emblem; naturally, in the latter example it is the Quirigua Emblem.

In comparing glyphs on the North and South sides, it is immediately apparent that the same two pairs occur, although in transposed position, and that the same personages are present. Hence, this tells us that *personage and glyph pair correspond to each other*, as I have observed above. Personage N1 and the corresponding S2 are distinguished by their long hair. Apparently, this is a woman. Her glyph consists of the head of a young person, with a sort of curl in her forehead, followed by a pseudo-Kayab with a *Zac* superfix. This head seems to be identical to that of the number 1, the head of the young goddess. Her presence here seems to reveal that the sign might also be an indicator of female characters in general. Since the prefix that denotes female persons in the Maya language is *Ix*, I will provisionally designate this head as *IX* (with uppercase, to avoid confusion with a day name), in those cases where, in my opinion, it might refer to a female person.

Personage E3 again has long hair and a short cloak covering its shoulders. Note that the other two people lack this short cloak, which is optional for males, but obligatory for females. Its distinctive glyph (the upper one) consists of the *IX* head and an *Ik* with superfix. As a linguistic curiosity, I wish to point out that the Motul dictionary contains the following entry: *ix ikal*, principal lady. The same lady occupies the central position on the West side, W2 (long head, short cloak, which the other characters on this side are

missing again). The Palenque Emblem, which appears repeatedly on the sarcophagus as if it were some kind of surname, is located in this case in the two glyphs that form the second pair corresponding to this centrally placed character. Its identifying elements appear in the two glyphs to its left side: the first is the *IX* head, with the *Kan* symbol attached, and the second is *Ik* with a superfix that occurs also in the chronological band of the sarcophagus, East side, Qb–R (with crossed lines in the head and *Kan* tattooing), as well as in Tablet I of the same temple, in L4–K5 and L8–K9 (Figure 36.2, a–b).

In his analysis of the figures on the Tablets of the Palace and the Slaves, Ruz (1952b: 57; 1952c: 35) identified some of the participants as women, because of their long hair and short cloak. This is not the place for a detailed analysis of glyph *IX* in the Palenque inscriptions, but it is worth noting that in her study entitled “A Pattern of Dates and Monuments at Piedras Negras,” Tatiana Proskouriakoff has come, through a very different approach, to interpret the glyph of the young person with a curl on its forehead as indicative of the female sex. I mentioned above the belief that the same head has the numerical value “1,” which sometimes makes its correct identification difficult. An example is found in the combination 1 or *IX Katun* at Piedras Negras, studied by Proskouriakoff. Another example of such ambiguity can be seen in block A14 of the South Tablet of Temple XVIII at Palenque, which shows the compound “1-curl head-spiderweb.” In reading the head with a curl as “1,” we would have the apparently redundant “*Hun-hun-spiderweb*”; whereas if we read it as “*Hun-IX-spiderweb*,” we find a parallel with the name of Landa’s (1938: 7) goddess Ixhunie or Ixhunieta. To reinforce our identification of the glyph, we shall note the great scene of Room 2 at Bonampak. Above each of the two women represented in the scene, there are groups of three glyphs, both of which begin with a curled head.

Returning to the sarcophagus, I believe I can recognize the glyphs of some of the above-mentioned people in the chronological band on the sides of the cover; sometimes these are clear, sometimes concealed. I can establish the following correspondences:

Sides of the Sarcophagus	Chronological band
E3 = W2	East Qb–R
W3	East Gb
W1	West D–E (?)
N1 = S2	West Kb (??)
N2 = S1	West Nb

I have not found correspondences for characters E1 and E2.

I feel it is possible to assert with considerable certainty that the glyphs placed beside the people sculpted on the sarcophagus serve to identify them by name. These same names seem to appear in the chronological inscription of the Sarcophagus, associated with Calendar Rounds by means of quincunx. Now, the key rests in knowing the significance of the quincunx. Birth? Marriage? Death? Conquest? Beginning of reign?

The glyph group located in the North side of the chronological band, D–F, appears twice in variant form on Tablet I of the same temple. There, the second glyph contains in one instance (K12) the so-called “serpent segment,” and in the second instance (M5), the head of an animal with its upper lip turned upward (the main element of emblem P2?; Figs. 36.2 c–d). The same substitution can be seen in other examples of parallel clauses at Palenque (Palace Tablet F8, E9 and O8, P8; also the two series of small glyphs in the Tablet of the Slaves). The head with upper lip turned upwards can thus be considered as a head variant of the so-called “serpent segment,” at least at Palenque.

At this point, a question arises: Are the people named on the sarcophagus historical personages or deities, or perhaps priests with titles? In exploring the possibility that they might be deities, it is necessary to realize that our knowledge of the Maya pantheon is extremely poor. Nonetheless, it might be noted that neither the glyphs nor the people themselves correspond to the deities depicted in the codices. Despite the youthful features of some of the personages, even the Maize God should be discarded, since the plants that emerge with the people are trees or brushes, but never the maize plant.

The funerary element present in the final glyph of their names might lead to the belief that they could be infernal gods, but as we have seen, the funerary glyph is one of the Palenque emblems, and I do not believe it might have had an Emblem value on the one hand and an infernal value on the other. The clauses of the sarcophagus do not appear only in this monument, but also in other Palenque inscriptions, which do not suggest in any way a relationship with infernal deities.

In view of the connection in Mesoamerican thought between the number 9 and the subterranean world (there are nine priests—or whatever they may be—on the walls of the crypt, as in that of Comalcalco, see Blom and La Farge 1926–27, I: 116), we could interpret the people depicted on the Sarcophagus sides as the nine lords of the night. However, according to our analysis, there are only eight different personages. Thompson (1950: 214) advanced a timid hypothesis concerning seven terrestrial or agricultural gods, maybe related in some way to the 819-day cycle. If our personages were those, the different trees that emerge behind them would make sense, but the strange fact remains that maize is missing among these plants. The main argument favoring the hypothesis that they are historic personages rests on the fact that their glyphic names also appear in the inscriptions, above all, in the chronological band of the Sarcophagus itself, where they are associated with non-Period Ending Calendar Rounds. The solution to the problem should remain open. We need to study the names or nominal clauses in the whole corpus of Palenque inscriptions, taking into account T. Proskouriakoff's findings regarding a possible historical interpretation of the Piedras Negras inscriptions.

Finally, I wish to point out another possibly nominal association: glyphs *a* and *b* in Maudslay's nomenclature appear in front of the small priest on the left side of the Tablet of the Temple of the Cross; glyphs *c* and *d* appear in front of the high priest on the right side. In the Tablet of the Temple of the Foliated Cross, the priests shift places and their glyphs do the same: here, *b* and *c* (identical to *b* and *c* in the Temple of the Cross) correspond to the high priest, while *f* and *g* (identical to *a* and *b* in the Temple of the Cross) correspond to the smaller one. However, strangely, the same characters appear in the tablet of the Temple of the Sun, but without their accompanying glyphs.

“Historical Implications of a Pattern of Dates at Piedras Negras, Guatemala” and “Portraits of Women in Maya Art”

Tatiana Proskouriakoff

Seldom does a single article change a discipline. But Tatiana Proskouriakoff published one such paper in 1960, “Historical Implications of a Pattern of Dates at Piedras Negras, Guatemala.” This article led to a sea-change in Maya studies by demonstrating in a clear, meticulous way that the sculptured texts of the Classic period recorded, among other things, the dates and deeds of rulers. The modest caution she expressed in stating her interpretations—although the evidence presented was incontrovertible—may have reflected not only her careful nature but the momentous nature of her discovery, which ran counter to the strongly held views of powerful men in Maya studies.

*Tatiana Proskouriakoff was born in Toms, Siberia, and migrated to the United States as a child. In 1930, she graduated as an architect from Pennsylvania State College and six years later joined the University of Pennsylvania expedition to Piedras Negras, where she worked as a draftsman under the supervision of Linton Satterthwaite. Her great artistic and intellectual ability soon became obvious to her employers. After Piedras Negras, she was hired by the Carnegie Institution of Washington, with special encouragement from Sylvanus Morley, to draw a series of reconstructed views of Maya sites; these were compiled in her first book, *An Album of Maya Architecture* (1946). This was followed by *A Study of Classic Maya Sculpture* (1950), a systematic analysis of iconographic motifs that allowed her to develop a method for dating Maya sculptures without depending on Long Count dates.*

As in the case of Heinrich Berlin, a shift in perspective led Proskouriakoff to devise an innovative approach to the monuments, in which she interpreted their texts and images as bearers of historical information. In her case, this change came about because of her prior participation in the documentation of an important find (Ruppert, Thompson, and Proskouriakoff 1955; see also

Written in 1960 and 1961 by Tatiana Proskouriakoff (1909–85). Excerpted from Proskouriakoff 1960, by permission of the Society for American Archaeology. Not for further reproduction. Proskouriakoff 1961 reprinted by permission from Harvard University Press. Not for further reproduction.

M. E. Miller 1986b). As stated in the article reproduced here: "Since the discovery of the Bonampak murals, however, the belief in the completely theocentric preoccupation of Maya art has wavered." In consequence, she reinterpreted patternings in the spatial distribution of Piedras Negras monuments, and the dates inscribed on them, as compatible with the life-spans of individual rulers, in addition to interpreting particular glyphs as personal names and events. In subsequent years, she applied similar methods to the texts of Yaxchilan and other sites.

In addition to her well-known study on the history of Piedras Negras, we have chosen to reprint a less widely read article, in which she extended Berlin's (1959) identification of women's names in the inscriptions. Associating these names with their iconographic contexts, she emphasized, quite properly, the centrality of women in Classic Maya ritual and politics.

In her later years, Proskouriakoff published a detailed study of the jades from the sacred cenote at Chichen Itza (1974), a long-standing project begun by Herbert Spinden. This report provides another example of her extraordinary control over data, her perseverance, and her willingness to present them in an exemplary manner (I. Graham 1990). For epigraphers, however, it is lamentable that she was not able to work full-time on her research synthesizing Classic Maya history. This book that resulted from this investigation appeared posthumously (Proskouriakoff 1993), after a lengthy editorial process. Notes at the Peabody Museum make it clear that, toward the end of her life, Proskouriakoff acknowledged the growing number of differing opinions about Classic history, but felt these should be aired by reviewers, not by extensive rewriting on her part (her health had begun to fail). This volume contains much that is historical in two senses: it is a chronicle of Maya dynasties and a reflection of Proskouriakoff's views in the 1970s and early 1980s.

"HISTORICAL IMPLICATIONS OF A PATTERN OF DATES AT PIEDRAS NEGRAS, GUATEMALA"

Ever since Teeple (1930b) first demonstrated the character of the lunar count in the supplementary series of Maya inscriptions, attempts have been made to find further astronomical significance in monumental texts. Perhaps the most ambitious was the work of H. Ludendorff (1930–43), who calculated astronomical configurations for a large series of Maya dates using the Spinden correlation. Both he and Spinden seemed convinced that the recorded dates were chosen specifically because of such configurations, but they failed to identify any hieroglyphs that consistently accompanied events of a given sort, and by and large, their thesis was rejected by contemporary scholars.

Two other propositions associating dates with calendrical significance have received wide acceptance. They too, however, fail to account adequately for the choice of the dates inscribed. Teeple's theory of determinants holds that some dates represent corrections of the solar year or are solar year anniversaries of the base of the long count, but in most cases the dates in question are not uniquely determined by the correction. For discussions of the problem, the reader is referred to Thompson (1950: 317–20), who has been the chief proponent of the theory and to Satterthwaite (1947: 135–42), who has been its strongest critic.

The second proposition concerns a period of 819 days, which appears as a common factor in five distances between dates identified by distinctive glyphic passages (Thompson

1950: 212–17). No astronomical significance could be found for this number, and its function as a ritual cycle is not fully understood.

In spite of the meagerness of these results and their failure to account for the patterns of date sequences, the hypothesis that Maya dates were chosen exclusively for their astronomical and calendrical significance still prevails, and the alternative, that they were essentially historical records, is expressly rejected by Thompson (1950: 64), and consistently ignored by others. To the argument that astronomical records would inevitably result in frequent repetitions of the same dates at various sites, Thompson replies in effect that the import of the dates was prophetic and that combinations of factors related to auguries were so numerous that the potential choice of dates was very large. Even if true, this argument is hardly sufficient reason to reject categorically the possibility of historical content in Maya texts.

It is hardly to be expected that the historical nature of dates can be demonstrated or disallowed until the hieroglyphic texts are at least in part deciphered, for history does not run in regular cycles. Its characteristic patterns are complex and variable, and the same event can be formulated in a variety of statements. Nevertheless, there remains much that can and that needs to be said for the historical hypothesis and in this paper I attempt to show that a certain pattern in the recorded events at Piedras Negras has the qualities one might expect of a historical narrative. Its general nature is that of overlapping but discrete series of dates, having a fixed order but variable intervals, and capable of being construed as expressing life histories of individuals (Figure 37.1). This pattern is reflected in certain motifs depicted on the monuments, and in their physical grouping. Although in its entirety it seems to be peculiar to Piedras Negras, certain features of it can be detected also at Naranjo, though here the uncertainty of the deciphered dates and the poor photographic record of the inscriptions preclude an adequate reconstruction of the sequences.

PIEDRAS NEGRAS

At this site (Maler 1901), the first monument of a group dealing with a series of related dates is usually carved with a distinctive motif. In its characteristic form, this motif presents a person in ceremonial garb, seated on a cushion within an elevated niche or doorway reached by a ladder marked with footprints. I will call this the “ascension motif” (Figure 37.2). The niche is framed by a “sky band” of astronomical signs, with a grotesque bird above, and a two-headed monster below, a combination of symbolic figures that I will refer to as the “cosmic motif.” In some cases where an ascension is depicted, there is a robed figure standing on the ground in front of the niche, and in at least one case, human sacrifice is symbolically indicated.

The monuments dealing with a given series of dates are normally aligned in a group, their terminal dates recording an uninterrupted series of consecutive hotuns beginning with that of the ascension stela. Within the hotun recorded on this stela is given a date followed by a specific hieroglyph identified by a vertical band or ribbon tied in a knot at the top as if binding the central element (Figure 37.3, 1st column). The bound element varies in different inscription, and since it is sometimes the head of an animate creature,

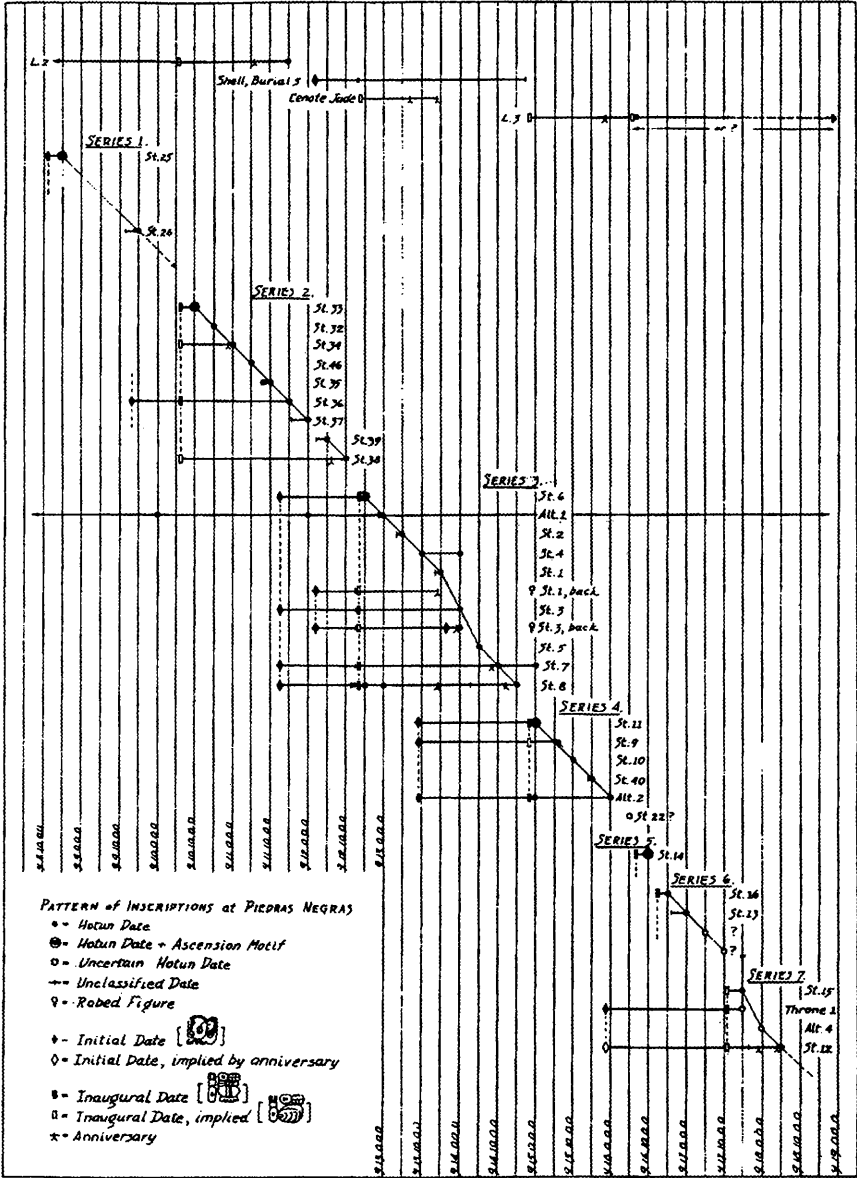


Figure 37.1. Graph of inscriptions on monuments at Piedras Negras

J. E. S. Thompson, in informal discourse, has dubbed this form the “toothache glyph,” a name which I will retain in order to avoid confusion of the glyph with other bundle forms. There is only one date in each series associated with this glyph, and since this date stands near or at the beginning of the record of current events for the series, it will be called the “inaugural date.” Such a date is often repeated or celebrated by the record of its tun-count anniversaries. References to it cease when another ascension stela is erected and a new inaugural date takes its place. The only exception is the record on



Figure 37.2. The ascension motif on Stela 6, Piedras Negras (Photo courtesy of the Peabody Museum, Harvard University)

Lintel 3, where a katun anniversary of an inaugural date is inscribed after at least one later series had run its course.

Another class of dates is identified by association with the upended frog glyph heading the right column of phrases in Figure 37.3. Teeple (1930b: 69) imputed to this glyph a lunar significance since a very similar glyph occurs in lunar series as Glyph D, but he was unable to determine its meaning precisely. Since dates associated with this glyph are normally the earliest of a series and precede the inaugural date by a number of years, they will be called “initial dates.” When a series contains more than one initial date, the

PATTERN OF DATES AT PIEDRAS NEGRAS

PIEDRAS NEGRAS

Phrases after inaugural and initial dates and their anniversary.

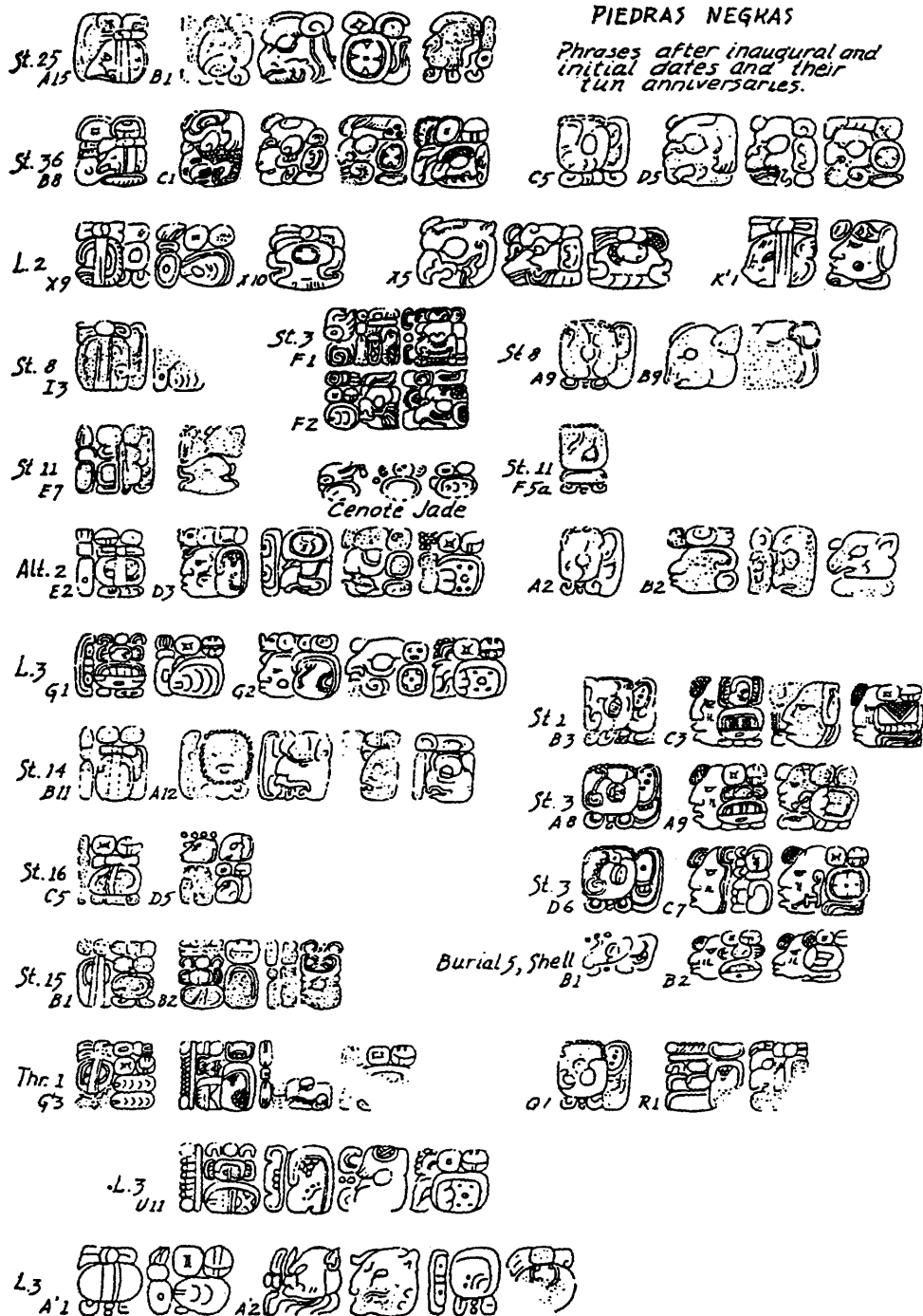


Figure 37.3. Glyphic expressions following inaugural and initial dates and their anniversaries at Piedras Negras

later initial dates apparently refer to subsidiary figures and, so far as we know, are the earliest references to them.

The suggested terms are not intended to reflect the supposed meaning of the dates recorded or of the motifs, but are used to facilitate reference and to make more immediately apparent the regularities in the grouping and in the records of the stelae. Some personal judgement has been unavoidable in presenting the monumental series, but as far as possible, speculations concerning the significance of the pattern are relegated to a separate section, in which a specific interpretation is suggested. A graphic summary of the pattern is given in Figure 37.1.

Positions of hieroglyphs in texts are given by the system used by Morley (1937–38) and the following abbreviations are used to designate monuments and dates: St., Stela; L., Lintel; Alt., Altar; Str., Structure; IS, Initial Series date; CR, Calendar-round date; PE, Period ending date (used also for expressed anniversaries).

SERIES 1

Monuments: St. 25—9.8.15.0.0; St. 26—9.9.15.0.0.

Location: On platform in front of Str. R-9.

Initial motif: Ascension, with cosmic motif. No minor figure.

Initial date: Unidentified; apparently not recorded on ascension stela.

Inaugural date: 9.8.10.6.16 10 Cib 9 Mac—St. 25, IS with toothache glyph at A15.

The grouping of monuments at Piedras Negras, though exceptionally clear, does not include the earliest monuments, which are too eroded and too scattered to provide requisite information on their arrangement. Stelae 25 and 26 constitute the earliest series that can be discerned. Unlike monuments of later groups, which were erected at hotun intervals, these are dated a katun apart. Morley places Stelae 28, 24, and 27 in the interval, but the dates on these monuments are illegible and there is no real evidence that these hotuns were ever recorded. Stelae 41, 43, and 31, which Morley assigns to the hotuns following that of Stela 26, are also very dubious in date. They are associated with other South Group structures and there seems to be insufficient reason to include them with the Structure R-9 group. Nevertheless, the first series as described may be incomplete, or there may have been another series, not covered in this summary, intervening between Series 1 and 2.

The toothache glyph appears on Stela 25 three times: first immediately following the supplementary series of the Initial Series date, then before a secondary series counted from it into the past (at I8), and finally after a series leading from it to the current hotun (at I12). In each case a reference to the same date is implied. There is an earlier date recorded, but judging by glyphs associated with it, it is not an initial date.

SERIES 2

Monuments: St. 33—9.10.0.00; St. 32—9.10.15.0.0; St. 34—9.11.5.0.0(?); St. 46—9.11.10.0.0; St. 35—9.11.10.0.0; St. 36—9.11.15.0.0; St. 37—9.12.0.0.0; St. 39—9.12.5.0.0; St. 38—9.12.10.0.0.

Location: First seven monuments aligned in front of Str. R-5; last two, in front of Str. K-5.

Associated sculptures: Lintel 2, found at Str. O-13; Lintels 4 and 5, at Str. R-5; Lintel 7, at Str. K-5(?). Possibly also Throne 2 and Miscellaneous Sculpture 1.

Initial motif: Probably a variation of the ascension motif. Figure is seated on an elevated platform adorned with elements of the cosmic motif. Robed figure stands at left.

Initial date: 9.9.13.4.1 6 Imix 19 Zotz—St. 36, CR with upended frog glyph at C5.

Inaugural date: 9.10.6.5.9 8 Muluc 2 Zip—St. 33, CR at E1, F1, apparently no toothache glyph; St. 36, IS with toothache glyph at B8; St. 38, CR at B7b(?); L.2, implied by a secondary series with toothache glyph at X9. Thirteenth tun anniversary St. 34, PE at C9, connected by secondary series. Second katun anniversary—Str. 38, CR at B9b(?).

Although the initial motif of this group is not a niche composition, it appears to be only a variation of the ascension theme. The principal figure is seated on a cushion placed on a pedestal with a plinth and an upper band or molding which may be a “sky band.” Obscuring outlines of the pedestal is an intricate design in which one can distinguish the head of the so-called Celestial Dragon, a limb with its cloven hoof, a serpent fret, of a kind that is used also in the design on Stela 11. The ladder and the footprints are not evident. Above the figure there seems to be some sort of canopy. The figure is dressed in ceremonial garb and holds an object that most probably is a bag, so that its pose, with the exception of the head turned over the right shoulder, resembles closely the pose of figures in niches.

The inscription on the sides of Stela 33 is eroded, and the inaugural date appears only on the front, where the toothache glyph does not seem to accompany it. The association of the date and the glyph on Stela 36, however, is perfectly clear.

The separation of the last two stelae from the group is irregular, but Stela 39, which records a sequent hotun, is clearly not an ascension stela, but one with a “warrior” figure. Moreover, Andrews (1942) has linked the inscription on Stela 38 to that of the group by a katun anniversary, which shows the inscription to be part of this series.

SERIES 3

Monuments: St. 6—9.12.15.0.0; Alt. 1—9.13.0.0.0; St. 2—9.13.5.0.0(?); St. 4—9.13.10.0.0; St. 1—9.13.15.0.0; St. 3—9.14.0.0.0; St. 5—9.14.5.0.0; St. 7—9.14.10.0.0; St. 8—9.14.15.0.0.

Location: Stelae aligned in front of Str. J-4; altar in plaza below terrace.

Associated inscriptions: Shell plaques from Burial 5; carved jade from Sacrificial Cenote at Chichen Itzá (Proskouriakoff 1944).

Initial motif: Ascension, with cosmic motif. A robed (?) figure on one side of the monument.

Initial dates:

- (1) 9.11.12.7.2 2 Ik 10 Pax—St. 6, CR, possibly preceded by upended frog glyph at X7 (?), see remarks for suggested decipherment; St. 8, IS with upended frog glyph at

A9. Fifty-seventh tun anniversary—St. 7, PE at D9, C10. Third katun anniversary—St. 8, at C19, D19.

- (2) 9.12.2.0.16 5 Cib 14 Yaxkin, associated with robed figure—St. 1, IS with upended frog glyph at A8; inscribed shells, CR with upended frog glyph at B1.
- (3) 9.13.16.4.6 4 Cimi 14 Uo, possibly referring to small figure on throne—St. 3, CR with upended frog glyph at D6.

Inaugural date: 9.12.14.13.1 7 Imix 19 Pax—St. 6, CR at W10, X10, see remarks for suggested decipherment; St. 3, CR at I6; St. 7, CR at C6; St. 8, CR with toothache glyph at I3 (?). First katun anniversary—St. 1, CR at G8, G9; St. 8, PE at U1, V2. Fifth hotun anniversary—St. 3, PE at I10, J11.

Morley reads W8 on the right side of Stela 6 as 2 Ahau. The glyph at X8, however, has a coefficient of 10, and I suggest that this date reads 2 Ik 10 Pax and that it is the starting point of the secondary series at W6-W7. The revised inscription would read as follows:

W8X8	(9.11.12.7.2)	2 (Ik) 10 (Pax)
W6X6W7	1.2.5.19	
W10X10	(9.12.14.13.1)	7 (Imix) 19 (Pax)
W11	4.19(?)	
	(9.12.15.0.0)	(2 Ahau 13 Zip)

There are three initial dates in this series. The second initial date occurs as a second Initial Series on two monuments, Stelae 1 and 3. In each case it is associated with a robed figure depicted on the back of the stela. It is about nine years later than the first initial date, which presumably is associated with the figure on the front. The third initial date is over 33 years later than the second and is inscribed on the back of Stela 3, where next to the robed figure is another very small one (Figure 37.4).

SERIES 4

Monuments: St. 11—9.15.0.0.0; St. 9—9.15.5.0.0; St. 10—9.15.10.0.0; St. 40—9.15.15.0.0; At. 2—9.16.0.0.0; St. 22 (?)—9.16.5.0.0.

Location: Stelae on platform in front of Str. J-3; altar in plaza opposite Str. J-2; St. 22 at Str. O-12.

Initial motif: Ascension, with cosmic motif. Human sacrifice at foot of ladder. On sides, a boy and two adult figures.

Initial date: 9.13.9.14.15 7 Men 18 Kankin—St. 11, CR preceded by upended frog glyph at F5a; St. 9, CR at C5, D5, possibly with upended frog glyph following secondary series at C3; Alt. 2, CR on south support, with upended frog glyph at A2.



Figure 37.4. Figure of woman and child on the back of Stela 3, Piedras Negras, with accompanying record (Photo courtesy of the Peabody Museum, Harvard University)

Inaugural date: 9.14.18.3.13 7 Ben 16 Kankin—St. 11, CR with toothache glyph at E7; Alt. 2, CR on east support with toothache glyph at E2. Seventh tun anniversary—St. 9, PE at C11, D12. Katun anniversary—L. 3, IS and PE at F1.

This series is irregular except for the uncertainty as to what happens after 9.16.0.0.0. Stela 22 is described as showing a standing figure and is dated 9.16.5.0.0. The case here may be like that of Group 2, whose last two monuments are in a different location. If Thompson's (1943a) reading for Stela 14 is accepted, the next series of dates begins and ends with the hotun 9.16.10.0.0. If this reading is in error, Stela 23 may record this hotun, and the next group would begin with Stela 16, erected in 9.16.5.0.0. In the following, it is assumed that Thompson's reading is correct.

SERIES 5

Monument. St. 14—9.16.0.0.0(?).

Location: On terrace in front of Str. O-13(?).

Initial motif: Ascension, with cosmic motif and robed figure.

Initial date: Unidentified

Inaugural date: 9.16.6.17.1 7 Imix 19 Uo (?)—St. 14, IS with toothache glyph at B11.

This monument stands alone unless at this time there were concurrent groups. The original placement of monuments in front of Structure O-13 is very uncertain, and the eroded inscriptions provide little additional evidence.

SERIES 6

Monuments: St. 16—9.16.15.0.0; St. 13 (?)—9.17.0.0.0; St. 17 (?); St. 18 or 19 (?).

Location: In front of Str. O-13; exact location uncertain. ST. 16 is probably the first monument of the group aligned in the plaza.

Initial motif: Destroyed. Probably standing figure. Figure of boy and two adults on sides, as on St. 11.

Initial date: Unidentified.

Inaugural date: 9.16.12.10.8 6 Lamat 1 Mac—St. 16, CR with toothache glyph at C5.

A drawing made by Mary Butler of the front of Stela 16 seems to indicate that the figure is standing. If this is true, the association of the ascension motif with the inaugural date is broken at this time, but the traces of sculpture are so vague that a misinterpretation of the lines and their significance seems very possible. The entire pattern at this time becomes rather uncertain for there are more monuments in the plaza in front of Structure O-13 than can be accounted for on the basis of a single monument for each hotun. The next group apparently begins with Stela 15 on the summit of the pyramid, and this again is a standing figure.

SERIES 7

Monuments: St. 15—9.17.15.0.0; Altar 4 (?)—9.18.0.0.0; St. 12—9.18.5.0.0; probably others, unidentified.

Location: Known stelae on summit of Str. O-13; Alt. 4 in plaza.

Associated sculpture: Throne 1, in Str. J-6. Possibly Lintels 1 and 3.

Initial motif: High relief standing figure holding bag.

Initial date: 9.15.18.16.7 12 Manik 5 Zotz—Throne 1, with upended frog glyph at Q1. Forty-sixth tun anniversary—St. 12, PE with upended frog glyph at B21a.

Inaugural date: 9.17.10.9.4 1 Kan 7 Yaxkin—Throne 1, CR with toothache glyph at G13. St. 15, toothache glyph at B1; preceding date destroyed. Possibly 9th tun anniversary on St. 12 at D19.

The series begins with a standing figure, but this figure is neither a warrior nor a grain-scatterer. It is carved in unusually high relief and is shown holding a bag, as do the seated niche figures. The ascension motif may have been expressed by its high position on the pyramid or on surrounding architectural features.

After the assignment of stelae in front of Structure O-13 to the hotuns intervening between Stelae 16 and 15, there remain six unassigned monuments: Stelae 18 or 19, 20, 21, and 23; Altars 3 and 5. If these monuments belong to Series 7 its record could be extended to 9.19.10.0.0 or 9.19.15.0.0. It is possible, however, that Series 7 is not the last and that another series is represented.

ODD OCCURRENCES OF UPENDED FROG AND TOOTHACHE GLYPHS

Lintel 1: Upended frog glyph and three other glyphs in association with a female figure. No associated date.

Lintel 2: Toothache glyph at K'1 without affixes and with animal head as main element; first in panel of five glyphs probably referring to minor figure behind the chief warrior.

Lintel 3: Toothache glyph at A'1 following secondary series counted from 2 Cauac 2 Muan, and possibly also immediately after this date. The long count position suggested by Morley is 9.16.6.10.19, 122 days before the inaugural date of St. 14 (Series 5). The IS on this lintel records the first katun anniversary of the inaugural date of Series 4, and as Thompson (1944a: 77–78) has shown, the record continues at least to 9.17.11.6.1, which is a tun anniversary of a date on Throne 1 (Series 7). Thus, the inscription on L. 3, unlike the stela inscriptions, is not limited to dates of a single series.

DISCUSSION AND SPECULATIONS

The date summarized in figure 37.1 and Table 37.1 lead to the following observations:

- 1. That the ascension motif at Piedras Negras marked the beginning of a series of monuments dealing with a sequence of related dates, and that the motif symbolized

TABLE 37.1. SUMMARY OF DATE INTERVALS AT PIEDRAS NEGRAS.

Series	<i>Initial Date to Inaugural Date, Same Series</i>	<i>Initial Date to Initial Date, Next Series</i>	<i>Initial Date to Inaugural Date, Next Series</i>	<i>Inaugural Date to Inaugural Date, Next Series</i>
1	?	?	?	1.15.16.13 (35+ years)
2	13. 1. 8 (12+ years)	1.19. 3. 1 (38+ years)	3. 1. 9. 0 (60+ years)	2. 8. 7.12 (47+ years)
3	1. 2. 5.19 (22+ years)	1.17.7.13 (36+ years)	3. 5.14.11 (64+ years)	2. 3. 8.12 (42+ years)
4	1. 8. 6.18 (28+ years)	?	2.17. 2. 6 (56+ years)	1. 8.13. 8 (28+ years)
5	?	?	?	5.11.17 (5+ years)
6	?	?	?	17.16.6 (17+ years)
7	1.11.10.17 (31+ years)	?	?	?

an event that recurred at irregular intervals and was of some civic and religious importance.

2. That the earliest date relevant to a series was marked by the upended frog glyph, and was some distance in the past when the ascension motif stela was set up. Later dates marked by the upended frog glyph, and also called initial dates, begin records dealing with subsidiary figures.
3. That the ascension motif is associated with a date which falls in the hotun preceding its erection. This date, called the inaugural date, probably, though not necessarily, is the date of the event symbolized by the ascension.
4. That the initial and inaugural dates are normally repeated and celebrated by anniversaries only within the series in which they occur, the inscription on Lintel 3 being unusual in this respect.
5. That the distance between the initial date of a series and the inaugural date of the next does not exceed the limits of a reasonable lifetime.

These observations indicate that at least some of the events dealt with in Piedras Negras inscriptions are periodic, but not cyclical, and that each series can be construed as recording a sequence of events in the life of a single individual. Inference carries us no further, but if we make some basic assumptions, we can explore a hypothesis without commitment, and it is in this spirit that the following interpretations are offered, without claim that they are the only possible interpretations or even that they are the best that can be devised.

The first assumption made is that the inaugural date celebrates the accession of a new ruler. The ascension motif seems peculiarly appropriate to express such a theme, especially in view of certain passages in the Books of Chilam Balam that refer to the "seating" of rulers. From Roys' translation of the rise to power of Hunac Ceel (Roys 1933a: 75), one might quote the following phrases (*italics mine*): "Then they began to declare him ruler. Then *he was set in the seat of rulers* by them." And further: "Then they began to set aloft the house on high for the ruler. Then *he was set in the house on high* in 13 Ahau, the sixth reign." Elsewhere there is mention of the "Jaguar mat" in connection with office, and the markings of a jaguar pelt can be clearly seen on the cushion on which the ruler is seated on Stela 25.

If the inaugural date celebrates the accession of a ruler, the initial date, which falls between 12 and 31 years earlier, must represent an event that happened early in the ruler's life, possibly even his birth, though more probably some ceremony corresponding to baptism or to his initiation into formal training. Years counted from initial dates will therefore be regarded as "ages" of the individuals concerned, with the understanding that they may fall somewhat short of ages counted from birth.

On the basis of these assumptions, the fourth column of Table 37.1 shows that the lengths of successive reigns were about 35, 47, 42, 28, 5, and 17 years, averaging to a reign of 29½ years. Where relevant figures are known, the ages of rulers at accession are shown in the first column of Table 37.1 to be roughly 12, 22, 28, and 31 years. Their lifetimes, measured from initial dates to inaugural dates of the next series, are 60, 64, and 56 years, and the distances between generations of rulers, 38 and 36 years. The last two

figures, associated with long reigns, suggest that the succession was not always from father to eldest son, since the figures are too high to represent normal distances between generations. The lifetimes and the reigns indicated are also of greater length than one would expect, and it is possible that sometimes on the death of a ruler the reign was continued by a younger brother, as Landa describes happening in Yucatan (Tozzer 1941: 100), without the event calling for a new accession monument. Nevertheless, even if the figures refer to single individuals, they are well within the bounds of possibility for a limited period, and in default of evidence to the contrary it will be assumed that the principal figures of a group of monuments all portray the same person.

Thus one can envisage Stela 25 with its ascension motif as representing the accession of a ruler, whose portrait a katun later appears on the companion Stela 26 in the guise of a "warrior" with two prisoners at his feet, apparently symbolizing an aggrandizement of his power or some exploit of valor. Fifteen tuns later, with Stela 33, begins the longest reign recorded. The incumbent ruler at the time of his accession was not yet 13 years old, and perhaps because of his youth, he is shown with a robed figure beside him. If we knew the initial date for Stela 14, which shows a similar robed figure, we could check this interpretation, but that date, unfortunately, is unknown.

Robed and skirted figures on Maya stelae have always posed a problem, for some scholars have been reluctant to accept them as figures of women. This reluctance hardly seems justified since the discovery of the Bonampak murals, in which a woman and a child play an important role in the ceremonies depicted (Ruppert, Thompson, and Proskouriakoff 1955). There is also confirmation of the female sex of robed figures in hieroglyphic passages associated with them, which almost always contain female head glyphs. The inscription on the front of Stela 33 contains one of these glyphs. Evidence on this will be presented later, and at this time it will be assumed that all the robed figures at Piedras Negras represent women.

On Stela 32, the ruler is shown holding a shield. There is a robed figure on the right side of the monument, possibly the same as on Stela 33, but more probably a wife of the young man, who was then 21 years old. Five years later, he is shown on Stela 34 with a shield and hatchet. The next monument is glyphic and we have no portrait of the ruler in this hotun but when he had reached the age of 36, on Stela 35, he seems to have gained considerable weight, and is depicted as a warrior with a prisoner at his feet. The reign of this ruler lasted for 47 years, and he would have been 60 if he were still living when the next ruler acceded.

This ruler, shown on Stela 6 (Figure 37.2), was 22 years old. On the side of the monument is depicted another figure, but it is not altogether clear whether it is that of a man or a woman. A lahuntun later, on Stela 2, on which the main figure is shown with a gesture of scattering grains, the figure on the left side clearly wears a robe, and on the top of the monument there is a curious little figure that seems to be sitting on a tub or basket. One is led to wonder if this might represent the first born of the royal pair. If so, he never succeeded to the throne, for the initial date of the next ruler was still four and one-half years ahead. When Stela 4 was erected, the ruler was 37, and, as befits his age and rank, he is shown as a warrior with two prisoners. On the next two monuments, Stelae 1 and 3, his portrait is eroded, but two portraits of the woman who was probably his wife are

excellently preserved on the back of the monuments. The initial date that goes with these portraits shows the woman to have been nine years younger than her husband, and 37 years old at the time of the erection of Stela 3. On this stela (Figure 37.4) she is shown sitting on a throne with a small child beside her, a little girl, three years old, as indicated by a second initial date recorded on this monument.

This unusual representation and the next, on Stela 5, may indicate that at this time there was no natural successor to the throne. Stela 5 shows a young man confronting the ruler, who is seated on a jaguar throne surrounded by cosmic or dynastic symbols. If this composition can be construed as expressing the appointment of a new successor, it can be shown by the initial date of the next series that he was at this time 15 years old.

On the next two stelae in this group the ruler is shown in the guise of a warrior with prisoners (Figure 37.5), and then on Stela 11, the successor assumes his rule at the age of 28. On the left side of the monument is shown a young man or boy, who presumably is his heir, and on the right are two adult figures. One of these, by his paunchy build, calls to mind the fat slave or eunuch in charge of the child on the Bonampak murals, and suggests that the adult figures may represent tutors or guardians of the boy.

Stela 9, which follows, has the usual warrior-and-prisoner motif that seems to be used often with rulers over 30, but the next two monuments, Stelae 10 and 40, are very unusual in composition. Stela 10, erected in 9.15.10.0.0, shows a young man seated on a cushion and a jaguar standing behind him and extending a foreleg over his head. This motif is analogous to motifs on two Tikal lintels (Maudslay 1889–1902, Vol. 3, Pls. 71, 72), one of which is associated with the same lahuntun date. What this arrangement may signify it is hard to say. Stela 40, which was erected next, shows a bust of one figure on a throne, and another figure on the canopy above, scattering grains. What seems to be suggested is some delegation of power, perhaps a temporary subservience to a foreign potentate, perhaps an acting head of government appointed to carry on the functions of an incapacitated ruler. The end of this reign and the beginning of the next is clouded partly with uncertainties of decipherment but also with apparent complications of succession. Lintel 3 (Figure 37.6), though carved much later, probably recounts what happened. Its inscription begins with the katun anniversary of the inaugural date of Stela 11, falling soon after the erection of Stela 40. A gathering or council is shown, and in the background panel of glyphs we recognize the toothache element. The date associated with this element is not placed in the long count, but if Morley's suggested position is correct it falls only 122 days before the inaugural date on Stela 14, and perhaps is not itself an accession date but that of the council at which the decision of succession was made. If our interpretation of the robed figure on Stela 33 is correct, the chosen ruler on Stela 14 was very young at the time, and could have been one of the children shown on Lintel 3.

He did not rule long, however, for on Stela 16, erected only a hotun later, there is another inaugural date. The face of this monument is badly eroded, but the arrangement of figures on the sides is almost identical to that on Stela 11, showing a boy and two adults. If we assume that the boy is the ruler whose initial date appears on Throne 1, we find him to be 16 years old at the time. The age of the ruler himself is not known, but judging by the grain scattering motif, on Stela 13, he probably was still a young man, for

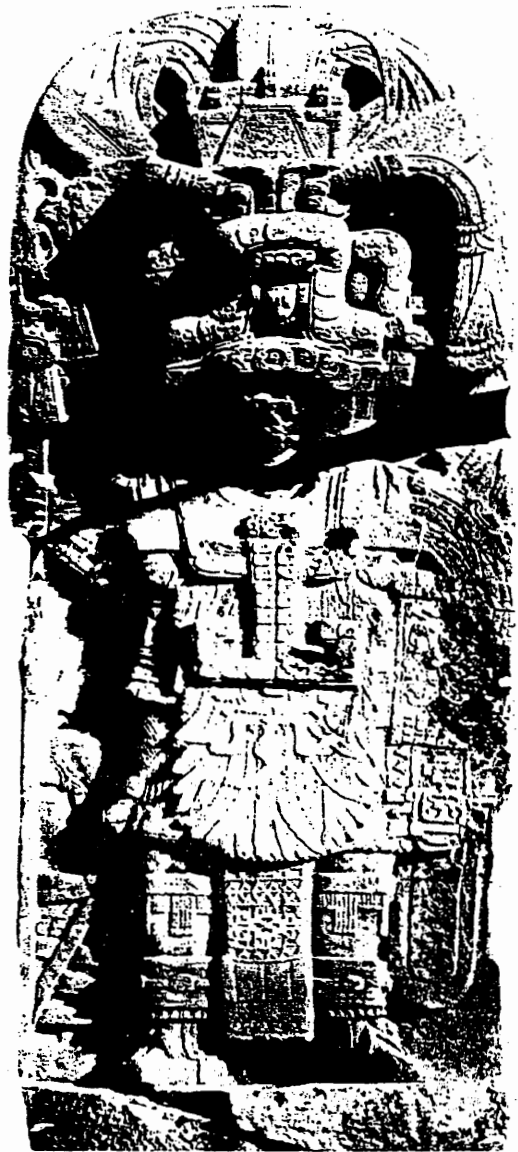


Figure 37.5. The “warrior” motif on Stela 7, Piedras Negras (Photo courtesy of the Peabody Museum, Harvard University)

on Stela 2 this motif occurs near the beginning of a series and after a ruler passed the age of 30 he seems to have been shown more often as a warrior with prisoners.

Stela 15 is probably the accession stela of the next ruler, whose dates appear on Throne 1. He was 31 years old at accession, and was 45 when, on Stela 12, he is shown arraigning prisoners in charge of two assistants.

Stela 12 is the last well-preserved monument at Piedras Negras, but there remains to be mentioned one additional association of a figure with dates that seem to imply its age. This is the figure of the prisoner kneeling at the left of the principal figure on Stela 8. The

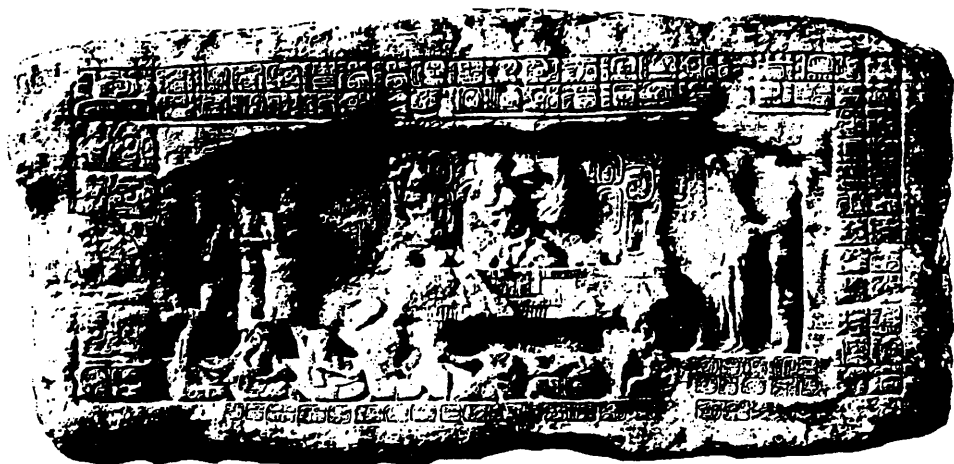


Figure 37.6. The council or audience scene on Lintel 3, Piedras Negras (Photo courtesy of the University Museum, Philadelphia)

prisoner is bearded, emaciated, and appears to be very old. Behind him, on the border of the monument are two dates connected by a secondary series of 4.8.2.14 (almost 87 years). This series is not connected to the main inscription, but apparently begins about 25 years before the initial date of this inscription and ends within a year of its final hotun date. Morley (1937–38) does not make clear in his publication if any identifying glyphs occur with the first date. His diagrams show four glyphs in the upper group, but only two are drawn. It is possible, therefore, that a glyph identifying this date was present, and that the age of the prisoner was indicated.

These interpretations show that the motifs of sculpture at Piedras Negras are entirely consistent with the theme of dynastic succession. None of the events, however, have been substantiated and another set of assumptions may produce a totally different but equally successful hypothesis. I have seriously considered the possibility that an ascension stela may represent human sacrifice and the apotheosis of the victim, but have found it difficult to account for the presence of figures of women and children in such a context. The stress on the familial theme, if it is accepted as historical, leads inevitably to matters of genealogy and the attainment of pre-eminent status.

Whether similar themes, less realistically expressed, are characteristic of other Maya cities, I have been unable to determine. The toothache glyph occurs sporadically at other sites but no articulated sequence of inaugural dates can be found. At Naranjo there is some evidence of discrete chronological series, but the grouping of the monuments and the pattern of the dates of their erection are different from those observed at Piedras Negras, and many inscriptions are inadequately recorded.

NARANJO

Naranjo stelae were often set up in pairs, one of each pair presenting a male figure, the other a figure wearing a skirt, and the inscriptions of both ending on the same date.

Male figures sometimes occur singly or grouped together, but all skirted figures have potential mates, though the erosion of inscriptions sometimes makes it difficult to prove their affiliation. The stelae of a pair sometimes stand side by side, sometimes face to face across a small plaza, and sometimes flanking other monuments previously set up. A series of monuments dealing with related dates is not limited to a single group, but may include several groups widely separated from each other. In the following summary, figures wearing a loincloth apron are identified as male, and those wearing skirts as female.

SERIES 1

Monuments. Group I: St. 22, male, St. 24, female—9.13.10.0.0; St. 21, male—9.13.15.0.0; St. 23, male—9.14.0.0.0. Group 2: St. 30, male, St. 29, female—9.14.3.0.0; St. 28, male, St. 31, female—9.14.10.0.0. Group 3: St. 2, male, St. 3, female—9.14.1.3.19(?); St. 1, male—9.13.10.0.0(?).

Location. St. 24 in front of Str. C-VII, facing St. 21, 22, 23, aligned in East Plaza in front of Str. C-VI; St. 28, 29, 30, 31 aligned on terrace in front of Str. C-IX; St. 1, 2, 3 aligned in front of Str. A-XV on West Plaza.

Initial date. 9.12.15.13.7 9 Manik 0 Kayab—St. 22, male IS with upended frog glyph at F6; St. 24, female, CR with upended frog glyph at B13; St. 29, female, CR with upended frog glyph at H8.

Inaugural date. None identified. At F18 on St. 23, with the date 1 Men 13 Yaxkin (9.13.18.9.5), is a glyph that may be a variant of the toothache glyph, but its identity is uncertain (Fig. 37.7). The distance of this date from the initial date is 1.2. 13. 18 (22+ years).

Other prominent dates.

- (1) 9.12.10.5.12 4 Eb 10 Yax—IS with female figures on St. 24, 29, and 3. It is the earliest date recorded, but not an initial date.
- (2) 9.13.1.3.19 5 Cauac 2 Xul—St. 22, male, CR at E9, F9; St. 21, male, IS. Katun anniversary—IS of St. 2, male.

The initial date is preceded by another on stelae with female figures, but as at Piedras Negras, it is the earliest date accompanying a male figure, and was 14 years in the past when it was recorded on Stela 22. It is not mentioned again with male figures, and a date about 5¹/₂ years later is celebrated by anniversaries in its stead. Another important difference with the pattern of Piedras Negras is the absence of an inaugural date on the first stela. If one is recorded at all, it is on the final stela of Group 1, Stela 23.

SERIES 2

Monuments. Group 1: St. 13, male—9.17.10.0.0; St. 14, male—9.18.0.0.0; St. 12, male—9.18.10.0.0. Group 1a: St. 33, male, St. 34, female—9.17.10.0.0(?). Group 2: St. 6, male (date unknown); St. 8, male—9.18.10.0.0; St. 7, male—9.19.0.0.0; St. 11, female (date unknown).

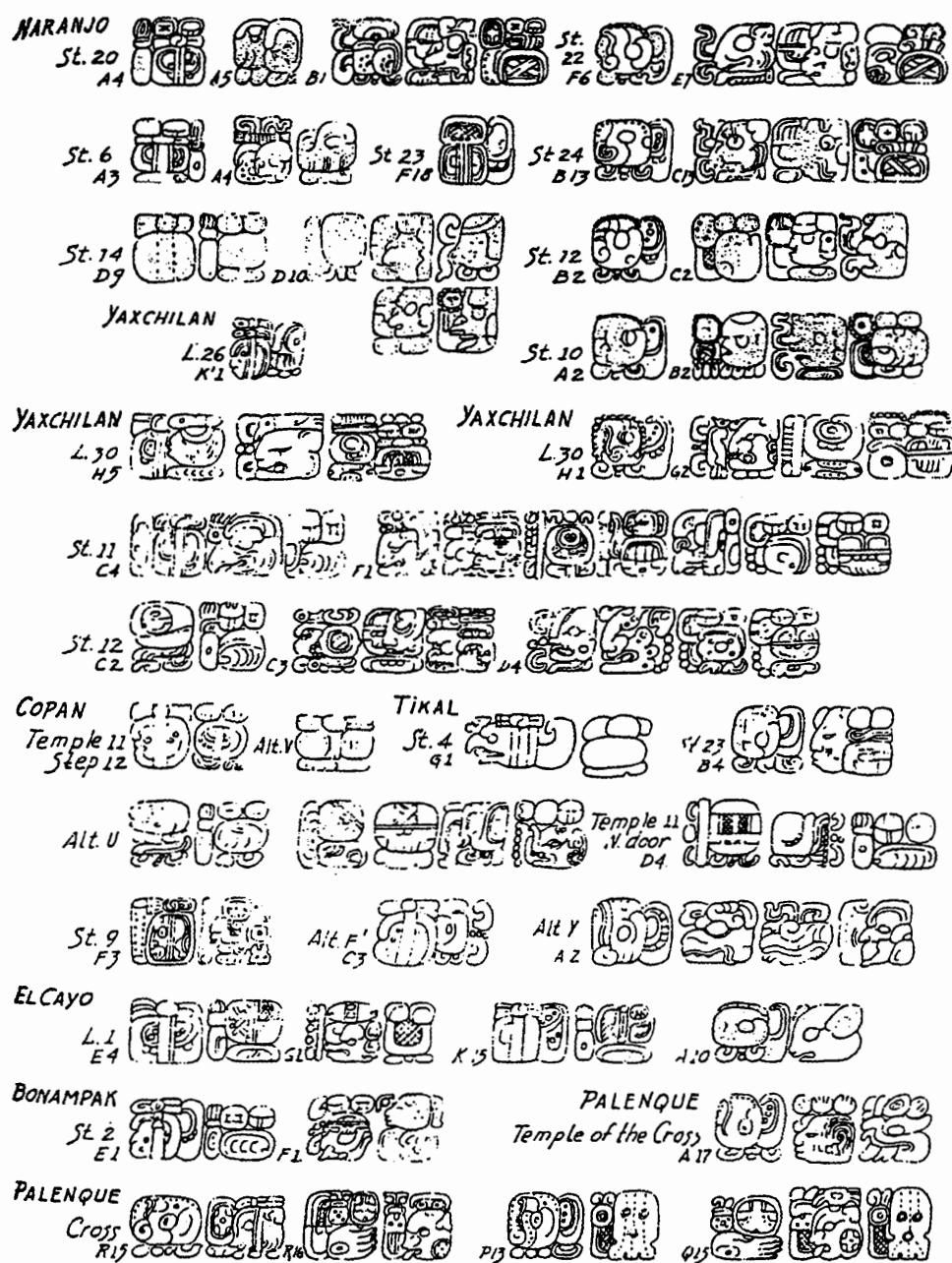


Figure 37.7. Glyphic expressions associated with the toothache glyph and the upended frog glyph at various sites

Location. Group 1, aligned in Middle Plaza in front of Str. B-XIX. Group 1a, Middle Plaza in front of Str. B-XX, with plain Stela B2. Group 2, in Court of Hieroglyphic Stairway, aligned in front of Str. B-IV. Group 2a, at other end of court in front of Str. B-XXIII.

Initial date. 9.17.0.2.12 13 Eb 5 Zip—St. 10, CR with upended frog glyph at A2; St. 12, CR with upended frog glyph at B2.

Inaugural date. 9----11 Muan, long count position unknown—St. 6, CR on front with toothache glyph at A3. Following the IS of St. 14, 9.17.13.4.3 5 Akbal 11 Pop, is a glyph that may be a toothache element without affixes, but the identification is uncertain. The distance of this date from the initial date is 13.1.11 (12+ years).

The date on Stela 6 is read by Morley as 9 Ahau 13 Muan, but in my opinion, the month coefficient is better read as 11. If this is the inaugural date for the series, its most probable positions are: 9.18.4.2.13 9 Ben 11 Muan and 9.18.17.5.18 9 Eznab 11 Muan. These positions, however, seem rather late for the style of the monument.

SERIES UNDETERMINED

Monument. Stela 20.

Location. In front of Str. B-XIII.

Inaugural date. 7 Cib 19 Chen or Yax—CR with toothache glyph at A4. Long count position unknown.

As I have pointed out elsewhere (Proskouriakoff 1950: 126–27) the date proposed by Morley for this stela does not accord well with its style, which is similar to that of Series I. The best positions for the date on the front are: 9.13.17.11.16 7 Cib 19 Chen and 9.12.17.7.16 7 Cib 19 Yax.

SERIES UNDETERMINED

Monument. Stela 32.

Location. In East Plaza in front of Str. C-IX.

The composition of this late monument suggests that it may correspond to the ascension motif of Piedras Negras and may begin another series. The stela dates from 9.19.10.0.0, but no relevant intermediate dates have been identified.

DISCUSSION AND SPECULATION

Until dates are better deciphered at Naranjo the pattern cannot be successfully compared with that of Piedras Negras. The inaugural dates at Naranjo do not appear to have been marked by a distinctive motif, nor is there any indication that they or initial dates were celebrated by anniversaries. The initial date, however, appears to retain an early position in the series, apparently the earliest that refers to a male figure. If we follow the interpretation suggested for Piedras Negras, the woman on Stelae 24, 29, and 3 is evidently of an older generation than the man on Stelae 22, 30, and 2.

Terminal dates do not run in a sequence of consecutive hotuns as they do at Piedras Negras, and are sometimes odd dates or their anniversaries. The assumption that every terminal date represents the date of the erection of the monument on which it is found does not seem justified here. In the case of Group 2, Series 1, the distribution of dates suggests that the whole group may have been set up as a unit on the lahuntun which ends the record as a whole. On the two monuments with male figures, Stelae 30 and 28, between 9.14.0.0.0 when the record begins, and 9.14.10.0.0, when it ends, 14 dates are inscribed in a sequence. Of these dates, 13 fall in the first hotun, and only one after 9.14.5.0.0. Perhaps the date 9.14.3.0.0 was chosen for the end of the first inscription merely to distribute these dates more evenly on the monuments. This would presuppose that the group had been planned after the recorded events had taken place. It seems quite likely that monuments at Naranjo were normally erected regularly at lahuntun intervals and that a number were set up simultaneously to take a single record, their terminal dates being not “dedicatory dates” but merely intermediate stopping places in a single historical record.

Thus, Group 1 of Series 1 may have covered the lahuntuns 9.13.10.0.0 and 9.14.0.0.0. Group 2 was probably set up in 9.14.10.0.0, and Group 3, where the date 9.14.1.3.19 seems to end at least one inscription, may have carried the count forward to 9.15.0.0.0. In Series 2, Stelae 13, 33, and 34 may have been erected at one time, with Stelae 14 and 12 added at lahuntun intervals. Groups 2 and 2a may have been set up in 9.19.0.0.0, though in this case the stylistic variation in the monuments makes me suspect that Stela 6 is earlier.

RECORDS FROM OTHER SITES

EL CAYO

Initial date. 9.16.0.2.16 6 Cib 9 Mol—L. 1, I.S. with upended frog glyph at A9.

Inaugural date 1(?). 9.16.12.14.10 5 Oc 3 Yaxkin(?)—L. 1, CR with toothache element at E4. Distance is 12.11.14 (12+ years).

This is the only known case of two inaugural dates occurring in one inscription. Like that on Lintel 3 at Piedras Negras, this record may span the period of two “reigns.” The variant forms of the toothache glyphs, however, give warning that one or both references may be not to an inaugural date but to one in some way related to it (Figure 37.7).

YAXCHILAN

Initial date. 9.13.17.12.10 8 Oc 13 Yax—L. 30, CR with upended frog glyph at H1.

Inaugural date. 9.16.1.0.0 11 Ahau 8 Tzec—L. 30, CR with toothache glyph at H5a; St. 11, IS with toothache glyph at O4, and second IS; St. 12, CR with unknown glyph followed by affix cluster at D2; L. 1, CR without toothache glyph; Alt. 4, IS; Alt. 14, IS. Distance from initial date is 2.3.5.10 (42+ years).

This very important inaugural date at Yaxchilan falls just at the time when at Piedras Negras there is some sort of irregularity in succession. Comparing phrases on Yaxchilan

Stelae 11 and 12 with those on Piedras Negras Altar 2, Throne 1, and Lintel 3, we find a number of similar glyphs, among them what I take to be the hieroglyph that Berlin (1958, Fig. 28) identifies as the “emblem glyph” for Piedras Negras, though he distinguished the form used at Yaxchilan as a different symbol. I find it also very striking that the bat and the jaguar head at D4C5 on St. 12 (Fig. 37.7) recur at A'2Z3 on Lintel 3 at Piedras Negras. I venture to suggest that these glyphs refer to one of the lords of Yaxchilan, who at Piedras Negras either headed the council represented on Lintel 3, or was the subject of its deliberations. The presence of two emblem glyphs in phrases referring to this person and to some of the rulers of Yaxchilan suggests to me a close union between the ruling families of the two cities at this time.

The toothache element in an unusual compound occurs at Yaxchilan on Lintel 26 at K'1 (Fig. 37.7) and variants of the upended frog glyph on Lintel 35 at V6 and on Lintel 42 at E3. These are not directly associated with dates.

BONAMPAK

Inaugural date. 9.17.5.8.97 Muluc 17 Yaxkin—St. 2, CR with toothache glyph at E1.

KUNA

Initial date. 13 Chicchan 13 Yaxkin—L. 1, CR with upended frog glyph at M1.

PALENQUE

There are a number of initial dates at Palenque, but their long count positions are in many cases uncertain, and the upended frog often follows secondary series, where its association with a date is not always clear. The Temple of the Cross inscription seems to deal specifically with initial dates, the earliest of which falls before 4 Ahau 8 Cumku. The record is discontinuous, and only a few of the initial dates seem to be connected to earlier dates by secondary series. An adequate discussion of the Palenque initial dates would be too lengthy to be included here. A distinctive compound containing the toothache element occurs in a number of records (Figure 37.7, Cross, R15S15), usually in a context of other non-calendrical glyphs. I do not know of an inaugural date clearly recorded.

COPAN

The very important date, 9.16.12.5.17 6 Caban 10 Mol, which occurs seven times at Copan and is celebrated by a katun anniversary on Altar T, is probably an inaugural date, though the inscription on Altar U seems to make it also an anniversary. On a step in Structure 11, it is followed by a glyph that includes the toothache element, and in Gordon's illustration of Altar V (Fig. 37.7; Gordon 1902, Figure 20) the eroded glyph following it looks as if it may be the toothache form. Elsewhere, the date seems to appear without affiliation with a toothache element, but the typical affix cluster of inaugural

dates is used on Altar U with a glyph that resembles Thompson's "seating of the haab" glyph, and again after a record of six tuns on a jamb of the north doorway of Temple 11. It seems likely, therefore, that 6 Caban 10 Mol was an inaugural date, though references to it do not always include the toothache element. Toothache elements in various compounds unassociated with dates occur at Copan on Stela 9 at C9 and F3, and on Altar F' at C3 (fig. 37.7; Gordon 1902, Figure 26).

Initial dates.

- (1) 9.10.10.5.11 10 Chuen 4 Cumku (Thompson 1944a)—St. 3, second IS with upended frog at A7b. Eleven days after date of first IS. Reading uncertain.
- (2) 6 Cimi 19 Uo—Alt. Y, CR with upended frog glyph at A2.

SEIBAL

Inaugural date(?). 9.17.0.0.0 13 Ahau 18 Cumku—St. 7, CR with toothache element in odd compound at A2.

PUSILHA

Initial date. 9.17.12.6.7 8 Manik 10 Kayab—St. H, second IS with upended frog glyph at D14. Distance to dedicatory date is 3.7.11.13 (66+ years).

MORALES

Initial date. 9.13.19.8.1 2 Imix 14 Tzec—St. 2, IS with upended frog glyph at B9 and at C8, following secondary series. Distance to dedicatory date is 1.0.9.10 (20+ years).

PESTAC

Initial date. St. 1, upended frog at D4; date undeciphered; follows secondary series of over 2 katuns.

TONINA

Initial dates.

- (1) 9.16.5.4.9 6 Muluc 17 Mol—St. 20, CR with upended frog at D4. Distance to dedicatory date is 1.14.13.11 (34+ years).
- (2) 12 Oc or Men 3 Zotz(?)—St. 30, CR with upended frog at A4.

TIKAL

Inaugural date(?). 8.17.2.16.17 5 Caban 10 Yaxkin or 9.3.1.10.2 5 Ik 10 Yaxkin—St. 4, CR with toothache element at A5.

Initial date. 9.3.9.13.3 8 Akbal 11 Mol—St. 23, IS with upended frog at B4. I am indebted to Linton Satterthwaite, Jr. of the University Museum, Philadelphia, for the readings of these two dates.

This list is incomplete. There are some toothache elements and many more upended frog glyphs for which date associations could not be found. J. E. S. Thompson, who very kindly supplied me with a list of the incidence of the two glyphs from his as yet unpublished dictionary of Maya hieroglyphs, and with several suggested readings of dates, cites in his list 31 examples of various toothache element compounds and 81 examples of the upended frog glyph, exclusive of its use in lunar series. In addition he calls attention to the toothache element in Codex Madrid 90a–93a, and in Codex Dresden 23b and 67a. In the Dresden, the toothache elements are followed by designations of gods, and on page 23b, various food offerings seem to be the subject of the text.

GLYPHIC IMPLICATIONS OF THE DATING PATTERN

The fact that the toothache glyph and the upended frog glyph are associated with certain dates in an ordered pattern indicates quite clearly that they signify events of a recurring nature. Thompson (1950: 264) notes that in divinatory almanacs in the codices, the first glyph of successive phrases is usually a glyph denoting some action or happening, and the toothache glyph holds precisely this position in Dresden 23b and 67a. Here the toothache element appears without affixes and is followed in each case by the designation of one of the gods. On the monuments, the expression is somewhat more complex, but the same order of the action glyph and the appellative holds, although the appellative is not one of the known god names and probably refers to the ruler of the city or district, since it changes with each set of records.

The first column of figure 37.1 shows phrases that follow inaugural dates at Piedras Negras. The toothache glyph stands immediately after the date and is recognized by the vertically tied main element. The normal form is best exemplified on Altar 2, where the glyph is seen to have a “ti” prefix, a “ben-ich” superfix and a suffix that is more clearly rendered on Stela 36. Here it is clear why Thompson called this the “toothache glyph,” for the tied element is the head of a vulture, a bird that also appears as a separate form following the toothache element on Stela 11 at Yaxchilan. It is used also in a cartouche for the day Ahau (Piedras Negras L. 3, V4, and St. 15 on pouch) and in place of the tun element of the katun (St. 3, F3). On Lintel 2 it ends three passages designating warriors who kneel before their leader. The vulture, therefore, may be something in the nature of a title or a clan symbol. There is also on Lintel 2 at K'1 a toothache glyph in the form of an animal head, but in later inscriptions the bound element tends to resemble the abstract “lunar” form.

In three cases, a so-called “lunar” postfix is added to the normal form of the glyph. I am not sure what circumstances determine its use or omission, but it occurs consistently with predicate glyphs, that is, with glyphs that immediately follow dates and that tend to be associated with certain motifs in sculpture. Various investigators recognize it as a verbal postfix, and Knorozov (1958: 285) gives it the value *h(a)* or *ah*.

On Lintel 2, Stela 15, Throne 1, and Lintel 3 at A'1, the toothache glyph is expanded into two characters. The first contains the toothache element with varying postfixes, and the second is made up of the affixes contained in the single for. When an anniversary of an inaugural date is recorded (L. 3, G1; St. 3, F1; Cenote Jade), only the affix cluster is used to denote the event; the toothache element is dropped. From this as well as from the fact that it is used alone in the codices, one may infer that the toothache element stands for a ceremony celebrating the event indicated by the affixes. For example, if the full phrase reads "the seating (of the ruler) on accession," the affix form following a period could signify "the anniversary of the accession" without mention of the ceremony. The actual meaning of the terms is unknown, but some construction is implied in the expansion and contraction of the forms.

In one instance at Yaxchilan (Fig. 37.7, St. 11, C4; St. 12, C2) and in another at Copan (Temple 11 step, Altar U), an inaugural date is followed in one record by the toothache glyph, and in another by a different character preceding the usual affix cluster. This character resembles one translated by Thompson (1950, Figure 19, 37–51) as "the seating of the haab." Although it stands in the same relation to the date and to the affix cluster as the toothache element, it is not a substitute for it since the following glyphs are not those that stand after the toothache expression. Apparently another observance taking place on the same date is indicated by the variant clause. The diversity of statements accompanying inaugural dates makes them sometimes hard to identify, but it offers an excellent test for phonetic decipherments, which, if they are valid, should result in readings making clear the relation of the different forms and linking them to a common event.

The upended frog glyph, used with initial dates, varies less than the toothache glyph. When it stands immediately after a date, it always has the same suffix and the so-called "lunar" postfix. Sometimes, when it precedes the date or stands after a secondary series leading from it, as on Piedras Negras Stela 11 at F5a (Figure 37.2), the lunar postfix is dropped, but this does not seem to have been mandatory, since at Palenque there are several examples of the upended frog glyph retaining the postfix after secondary series.

Additional glyphs referring to events or to ceremonies can be identified at Yaxchilan by their constant association with certain scenes portrayed on the lintels. Such glyphs always follow close upon the notation of a date. Among them is the "capture glyph" (Figure 37.8) which frequently occurs with scenes showing the capture of prisoners or with figures holding a serrated spear. This glyph, like the upended frog glyph and the toothache glyph, takes a "lunar" postfix. A similar glyph in the codices has been read by Knorozov (1958: 471, no. 15) as "*chucah*," past tense of "*chuc*," translated in the Motul dictionary as "*asir y prender, y echar mano, y tomar a uno en flagrante delito, o hallarle en algún maleficio*," or "*alcanzar a otro siguiéndole*," or "*dar alguna enfermedad a alguno*." The glyph in figure 37.8b goes with representations of a serpent from whose jaws issues the head and torso of a human or grotesque figure. I suspect that this motif represents a rite performed in memory of a dead hero, since its glyph is often associated with a date far in the past. The form in Figure 37.8, c accompanies pictures of the blood-letting rite. Barthel (1955, note 95) notes a glyph of similar construction, but somewhat different form used with tongue sacrifices in the codices.

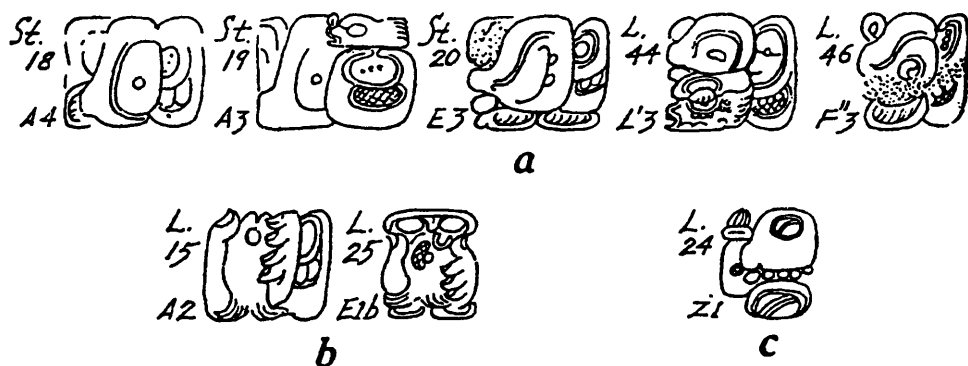


Figure 37.8. Action glyphs from Yaxchilan: (a) "capture" glyph; (b) hand-and-fish glyph, associated with the serpent motif; (c) glyph associated with the blood-letting rite

It seems safe to say that glyphs which immediately follow dates and especially those that tend to combine with the "lunar" postfix make reference to actions, events, or ceremonies, and are essentially predicate glyphs. Following them we can expect to find substantives referring to the protagonists of the events, and if the representations are historical, some of these should be appellatives identifying the persons involved. In the records of Piedras Negras, the glyph that immediately follows the statement of the event is the same for initial and inaugural dates, but varies with each set of records (Figure 37.2). On Stela 36 (C1-D5) all three animal heads following the toothache element are identical to the heads after the upended frog glyph, and two of them appear also in the record on Lintel 2 at X5, which makes reference to the inaugural date of the same series. In other cases, there is some degree of variation in the glyphs following the first, but it seems to me no more than one might expect in a group of appellatives applied to a person in different stages of his life, a group including not only personal names, but also titles, kinship designations, and honorary or descriptive epithets. Many of the appellative glyphs are zoomorphic, consistent with Roys' (1940: 35) comment that "many Maya patronymics are derived from well-known animals and plants." There are also abstract forms such as that heading the phrase on Throne 1 (H'3-R1). This phrase is repeated on Lintel 3 (U11); Thompson (1944a: 77-78) has read the last date on this lintel as falling within the contemporary record of the Throne 1 series. The inscription on the lintel also records an anniversary of the inaugural date of an earlier series represented by the phrase on Altar 2 (D3), and the appellatives in the two notations are identical except for the omission of one glyph in the later inscription (Lintel 3, G2).

The last glyph of these phrases is the "emblem" glyph, identified by Berlin (1958) and associated by him with Piedras Negras. This glyph carries through several sets of records, but on Stela 36 it takes a different form, and I am inclined to think that it refers to lineage or dynasty rather than to place. Preceding the "emblem" in some instances is an anthropomorphic jaguar head, which varies in detail in different sets of records. It can appear alone, when it apparently makes brief reference to the person elsewhere designated by a group of appellatives. A corresponding glyph in a more natural form of a jaguar at

Yaxchilan is of peculiar interest, and more will be said of it later. Here I merely want to point out that the study of the distribution of different forms contained in appellative phrases in respect to the different sets of records has at the very least the practical utility of aiding us in the reading of partially legible dates by limiting the span of time in which they can occur. Of even greater interest perhaps is the possibility of understanding the structure of nomenclature used by the ancient Maya and of tracing family relationships between the figures depicted in sculpture if our surmise concerning the appellative nature of these glyphic groups is correct.

In this connection, we should note that robed figures, which some have interpreted as male priests or penitents, are almost invariably associated with appellative glyphs prefixed by feminine heads, as on Stelae 1 and 3 (Figure 37.2). These heads are identified as feminine by a hatched oval on the forehead, which corresponds to the black spot used in the codices to identify women, or by a more naturalistic depiction of a lock of hair. On Stelae 1 and 3, the first appellative is a katun sign prefixed by a feminine head. This has been read as "1 katun," but such a record here has little meaning. The katun sign is worn on the headdress by the figure on Stela 1, and I believe must serve as a name or title. Although "Katun" is not one of the known Maya names, Roys (1940) gives "Ix Nacan Katun" as "the name or title of the head of a celibate religious order of women" in Yucatan. I doubt, however, that the lady in question was celibate, for on Stela 3, she is shown with a child, whose names also are prefixed by feminine heads, while appellative glyphs referring to male figures more often take zoomorphic or abstract forms. Heinrich Berlin in a recent study of the name glyphs at Palenque (1959) has reached the same conclusion on the function of some feminine head glyphs there.

Turning now to inscriptions at Yaxchilan, I want to point out another implication of the arrangement of records in distinct sets that can be identified by appellative glyphs. Berlin (1958) has noted the frequent occurrence here of two distinct phrases, one containing a jaguar glyph combined with a bird, a Cauac glyph, and the record of three ben-ich katuns (Figure 37.9, c), and the other, a jaguar with a shield, a glyph with an Ahau element, and the record of four or five ben-ich katuns (Figure 37.9, a-b). As an added or alternative glyph with the bird-jaguar phrase, there is a moon-like glyph, and with the shield-jaguar phrase, a death-head glyph. Many of the records at Yaxchilan contain only Calendar Round notations of dates, and it is reasonable to suppose that the ben-ich katuns in the jaguar phrases serve to place these dates in the Long Count. The question of how this is done has been a thorn in the flesh of epigraphers for many years. I am not certain that even now we can reach a definite solution of the problem, but there is a cogent possibility that these katuns are to be counted from initial dates of records identified by the different jaguar phrases.

In the inscription on the shells from Burial 5 at Piedras Negras (Figure 37.10), are two notations of four ben-ich katuns, one following the date 9.12.14.10.11 9 Chuen 9 Kankin, the other after 9.14.17.14.17 1 Caban 0 Mol (end of Yaxkin). Obviously these ben-ich katuns cannot both be counted from the same date, nor even from the beginnings of contiguous intervals. We can observe, however, that preceding the first notation is an anthropomorphic jaguar head which occurs in appellative phrases for the second and

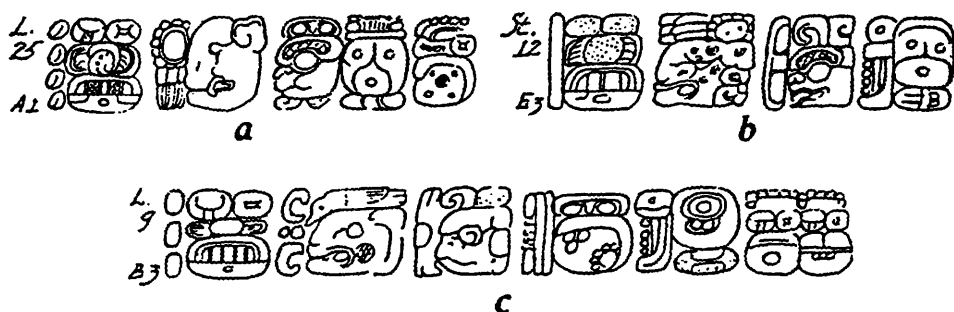


Figure 37.9. Ben-ich katun notations from Yaxchilan: (a) fourth ben-ich katun of the shield-jaguar; (b) fifth ben-ich katun of the shield-jaguar; (c) third ben-ich katun of the bird-jaguar

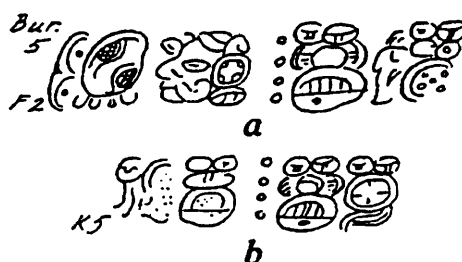


Figure 37.10. Two notations of the fourth ben-ich katun from shells found in Burial 5, Piedras Negras: (a) with date 9 Chuen 9 Kankin (9.12.14.10.11); (b) with date 1 Caban 0 Mol (end of Yaxkin, 9.14.17.14.17)

fourth series at Piedras Negras. Although the distinction between the two grotesque heads is not entirely clear, here it must be the second series which is meant, and counting from its initial date, we find that the date referred to falls in the fourth katun of the series. The second date belongs to the third series, and falls in the fourth katun from its initial date. The difficulty lies mainly in identifying the series or sets of records referred to, for neither here nor at Yaxchilan, is it always clear what particular glyphs identify the ruler or otherwise designate a reign.

On Lintel 30 at Yaxchilan, following the initial date, are the bird-jaguar and a moon-like glyph at G2, H2. The same glyphs recur on Lintel 31 at I1, J1, immediately after the inaugural notation of 11 Ahau 8 Tzec (9.16.1.0.0), and this time are followed by three ben-ich katuns (Figures 37.7, 37.8). Since 9.16.1.0.0 does not fall in the third katun after the initial date, this inscription bears out our hypothesis. On Stela 11, which records the same inaugural date, 9.16.1.0.0, we run into some complications. Morley's reading of Q13 as 7 katuns I believe can be rejected, since the vertical element here is clearly not a bar. One would expect, as on Lintel 31, the record of three ben-ich katuns, but the ben-ich element is not evident, even if we can restore the eroded coefficient as three. The Cauac glyph is here added to the jaguar phrase together with its constant predecessor, and the moon-like glyph is somewhat changed from the form it has on Lintel 30. On the

front of the stela, the notation of three *ben-ich* katuns and the bird-jaguar places the date 9.15.19.1.1 correctly in the third katun, though this date actually precedes the inaugural date and would normally be recorded in connection with an earlier reign. The moon-like glyph is dropped from this phrase. The relevance of the notation in the middle panel of the back of the stela is not clear. If it goes with the date 9.15.15.0.0 in the panel above, then our hypothesis is apparently contradicted, but there is already a record of five *ben-ich* katuns in the panel, preceding the bird-jaguar notation, so that the latter must refer to some other event.

The shield-jaguar and five *ben-ich* katuns are connected with the date 9.15.9.17.16 in a lower panel, and a similar notation with an added pair of glyphs including an Ahau element ends the inscription on the base, which records the inaugural date 9.16.1.0.0. The shield-jaguar and the Ahau element occur again with the male figure in the upper panel on the front of the monument, the portrait, no doubt, of the retiring ruler (Figure 37.11), whose initial date must fall somewhere between 9.11.1.0.0 and 9.11.9.17.15. On Lintel 56, the fifth katun of this jaguar is given with the date 9.15.6.13.1, thus lowering the upper limit of his initial date to 9.11.6.13.0. On the lintels of Structure 23, where an Initial Series 9.14.8.12.5 is recorded, the shield-jaguar phrase contains the record of four *ben-ich* katuns. This is entirely consistent with the hypothesis, but the dates 9.12.9.8.1 on Lintel 25, and 9.13.17.15.12 on Lintel 24 are outside of the range of the fourth katun, and the *ben-ich* katun notations that follow them must refer to the dates on the front of these lintels, though it is not altogether clear to me how this reference is indicated in the text.

The most serious contradiction of all occurs on Stela 6, where a date read by Morley as 9.11.3.10.13 5 Ben 1 Zotz is stated to be the second katun anniversary of the inaugural date of the bird-jaguar. This statement cannot be reconciled with the record on Lintels 30 and 31 unless we assume that there were at least two rulers at Yaxchilan with the same or with very similar names.

I do not want to minimize these difficulties, but they do not seem to me to be insurmountable, and they have no real bearing on the general conclusion that if the *ben-ich* katun notations do place dates in the long count, they must refer to some overlapping system of records analogous to that described for Piedras Negras. That this hypothesis demands a rereading of many of the dates proposed by Morley for the Yaxchilan lintels is all to the good, for Morley's dates are spread over too long a period of time to be consistent with the stylistic uniformity of the sculptures. I am confident that when we understand more about the structure of the jaguar phrases at Yaxchilan, we can reach a satisfactory solution of the problem of the *ben-ich* katuns.

The first important step is the recognition of the phrases as groups of appellatives referring to the current rulers or to their associates. This historical postulate can only be tested by use, but it seems to me it has already shown many advantages over the view that only religious and astronomical matters are dealt with in Maya texts. For example, neither lunar nor determinant meanings that have been advanced for dates show any correlation whatever with the hieroglyphs that follow date notations or with the sculptured representations on the monuments on which the dates occur. Teeple suggested (1930b: 55–57) that the dates, 9.12.2.0.16 at Piedras Negras, 9.12.10.5.12 at



Figure 37.11. The front or “deity” side of Stela 11, Yaxchilan: the figures in the upper panel may be ancestral portraits (Photograph courtesy of the Peabody Museum, Harvard University)

Naranjo, and 9.16.1.0.0 at Yaxchilan, celebrate the change to a lunar calendar. The first is an initial date followed by the upended frog glyph and associated with a female figure. The second also goes with the figure of a woman, but is not an initial date. The third is an inaugural date, associated with the toothache glyph and with figures of men.

The determinant theory also applies indiscriminately to various classes of dates and monuments. Two katun determinants listed by Teeple (1930b, Table 7) are inaugural dates: 9.10.6.5.9 from Piedras Negras and 9.16.12.5.17 from Copan. A third date, 11 Lamat 6 Xul, from Palenque, is an initial date, and the class of others is unknown. Thompson (1950, Table 21) lists among determinants for 8 Cumku the inaugural date 9.17.5.8.9 from Bonampak, and this is the only date of its kind that the table contains, the date 9.14.2.11.9 from Piedras Negras being of undetermined character.

All this does not mean that we must abandon the search for astronomical meaning in inscriptions, or that we need to make a categorical choice between the two approaches to the problem of date interpretation. But the astronomical approach has had a long head start on the historical, which has never been put to the test. Perhaps if we had expended as much time on seeking historical data as has been spent on lunar calculations, we might have collected by now a substantial body of facts on the dynastic structure of the Maya "Old Empire." To be sure, final solution of the import of the texts must probably await the decipherment of the hieroglyphs, but we are not yet so close to this achievement that we can afford to neglect other ways of tackling the problem, and the historical approach deserves at least an earnest consideration on our part.

"PORTRAITS OF WOMEN IN MAYA ART"

The typical Maya woman is most clearly portrayed in figurines made of clay. These figurines are not the popular cult objects that are associated with earlier stages of civilization in Middle America, for such cult figurines disappeared from the Maya area with the rise of a dominant organized religion. For a long time in Maya history clay figurines were rare, and the practice of making them was revived only when molds were introduced into the manufacture of clay objects at some time during the Classic Period. After that, figurines, often in the form of whistles and rattles, but sometimes also as grave objects, reappear in a wide range of styles and in many different forms. This new plastic art achieved its highest degree of perfection in the lower Usumacinta area and on the coast of Campeche. Figurines from Jonuta, Tabasco, and from Jaina, Campeche, are particularly well known for their naturalistic rendering, which reflects various aspects of daily life. Many figurines appear to be actual portraits, and from them we can get a fairly clear idea of the costumes worn by Maya women on different occasions.

The basic garment was a narrow, ankle-length skirt, which probably was the only piece of clothing worn when women went about their daily tasks at home (Kélemen 1946, pl. 134e). The skirt left the breasts exposed, though in some cases a broad sash was added extending the garment almost to the armpits. For public occasions, over the skirt was worn a tunic or *huipil*, which was variously cut and draped on the body. In some cases it was shorter in front than in back, open at the sides, and draped low on the shoulders (Medioni 1950, Figure 15); sometimes it resembled a cloak open in front (*Ibid.*, Figure 14); elsewhere it was stitched at the sides to form a voluminous garment entirely enveloping the figure or reaching to within a few inches of the hem of the skirt. For ceremonial functions, the *huipil* was richly embroidered with an over-all pattern and edged with cords and fringes (Instituto Nacional de Antropología e Historia 1946, no. 144).

Although the *huipil* was worn primarily by women, men also draped themselves in long tunics when performing certain religious rites, as is suggested in Eric Thompson's interpretation of the bloodletting scene on the murals at Bonampak (Ruppert, Thompson, and Proskouriakoff 1955: 63), where the costume of the principal figure is distinguished from that of the women only by the arrangement of the hair. This makes it difficult to determine the sex of robed figures, especially in monumental art, where sexual characteristics of the feminine figure are invariably suppressed. Observers differ widely in their

interpretation of figures on Maya monuments, some even holding them to be representations of gods, rather than portraits of real persons. Many consider the skirted and robed figures as those of priests or of male penitents in ceremonial attire, a view largely based on the theory that monuments were time-markers dealing with matters of the calendar, astronomy, divination and ritual, from which women were strictly excluded. Since the discovery of the Bonampak murals, however, the belief in the completely theocentric preoccupation of Maya art has wavered. In the scenes at Bonampak women are shown seated upon a throne, performing the bloodletting rite, and even assisting at the arraignment of prisoners after a raid. They preserve the female costume in various scenes, and if there remains any doubt whatever that they are women, the fact that a child seems to play a very significant role in the story is sufficient to dispel it. In a recent paper (Proskouriakoff 1960) I have shown that at Piedras Negras there is a pattern of dates that strongly suggests a historical record dealing with the succession of rulers, and if this interpretation of the pattern is correct, not only must we regard the sculptured figures on monuments as portraits of actual persons, but we must give added credence to the idea that the robed figures among them are women, for in dynastic matters family connections and descent are bound to play an important part, and there are indications that Maya culture was not without matriarchal traits. According to Roys (1940: 37–38) descent in Yucatan was traced through the female as well as through the male line, and if this was true also in Classic times, we can reasonably expect that the memory of women of high rank would be perpetuated in sculpture along with that of the men. Since women cannot be recognized by dress or by figure, my aim here is to bring other considerations to bear on the problem of their identification by investigating the contexts in which robed figures occur, their characteristic poses and actions, and certain glyphic passages which distinguish their sex.

Figures of women play a particularly important role in the art of the Usumacinta area, where group compositions and secular themes attain prominence in the Late Classic Period. The portraits on Stelae 1 and 3 at Piedras Negras are clearly two portraits of the same woman, associated on the latter monument with the figure of a small child (Figure 37.12, a). These monuments were erected in 9.13.15.0.0 and 9.14.0.0.0, and in each case the feminine figure is sculptured on the back, where there is also an Initial Series independent of the main record inscribed on the sides. The Initial Series date is followed by an upended frog glyph which shows it to be an initial date, that is, the earliest date about a specific person, probably something in the nature of a birthday or the date of a naming ceremony. This date is about 33 years earlier than the last date on Stela 1, and about 9 years later than the *initial* date that goes with the male figure on the front, suggesting that the two figures may be man and wife. Another *initial* date is given on Stela 3 in Calendar Round notation, and this evidently refers to the child figure, for it falls only about 3 years before the erection date of the monument.

The upended frog glyph that identifies these dates is in each case followed by at least two glyphs prefixed by human heads with either a strand of hair or a hatched oval on the forehead (Figure 37.13). By analogy with codex glyphs it can be shown that these are feminine heads, and the repetition of these glyphs after various dates intimates that they refer to the principal subject of discourse and are probably appellatives that

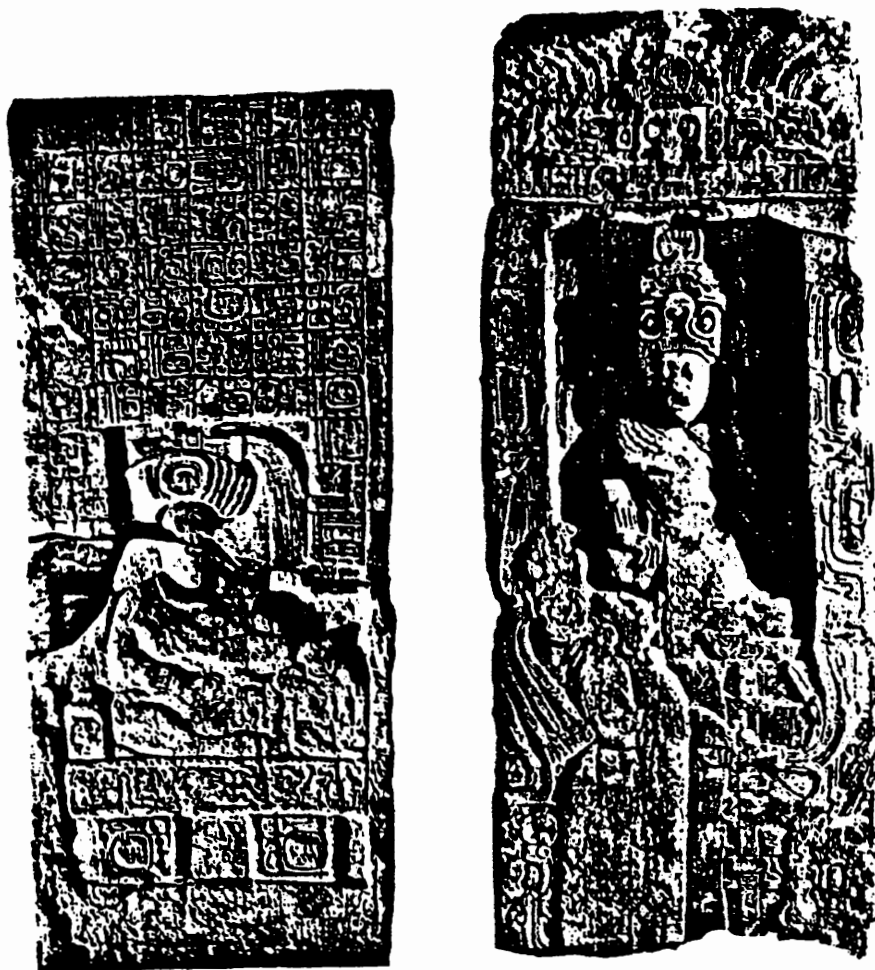


Figure 37.12. (a) Portrait of woman and child on Stela 3, Piedras Negras, with accompanying record (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University); (b) portrait of incumbent ruler and woman on Stela 14, Piedras Negras (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University)

identify the sculptured figure. The first of the feminine heads is attached to a *katun* sign, and the glyph has been read as a record of 1 *katun*. Such a reading is meaningless in this context, however, since the glyph occurs with dates more than a *katun* apart. We find that the *katun* sign is worn on the headdress by the figure on Stela 1, and is apparently to be construed here as a name or as a title. That such use of the word is legitimate is proved by the fact that a head of a religious order of women in Yucatan was called “Ix Nacan Katun” (*Ibid.*: 43). The next glyph seems to differ in the two inscriptions (Figure 37.13, a–b), but both forms are used in the record on the shells from Burial 5 (Figure 37.13, c), and it is possible that they are optional or even interchangeable. They have much in



Figure 37.13. Glyphs referring to women depicted on Stelae 1 and 3 at Piedras Negras; (a) from Stela 1; (b) from Stela 3; (c) from shells found in Burial 5



Figure 37.14. Glyphs referring to child figure on Stela 3 at Piedras Negras

common, and the main signs of both occur as elements of a “sky-band” on Stela 10. One of these signs is “akbal,” thought to represent night. The other shares with it a lower waved element, above which is a hatched triangle, which may similarly indicate darkness. After the later of the two initial dates on Stela 3 there is a different pair of glyphs prefixed by feminine heads (Figure 37.14), indicating a reference to another person, probably to the little girl shown sitting next to the main figure. The second glyph of this pair contains the symbol “kin” (day) in contrast to the night symbol of the main inscription. We have no assurance that these glyphs are actually names, but that they make reference in some way to the two figures can hardly be denied, and their evidence is as nearly conclusive proof of the femininity of the figures as we can hope to find, short of actual decipherment of the text. Nor is this association of feminine head glyphs with robed figures unique or even rare. The two occur together constantly, while in inscriptions with male figures, glyphs in corresponding relation to dates take zoomorphic or abstract forms. A close look at the glyphs associated with various figures in the arraignment scene from the Bonampak murals, reveals that here, too, the glyphic groups with feminine figures contain feminine head forms in association with other signs.

Where there is no independent text with a robed figure, or where the text is badly eroded, it is often difficult to show that the figure is that of a woman. We must rely mainly on analogy, but I see no reason to exclude such figures as those on the sides of Stelae 2 and 32 at Piedras Negras, or even that on the side of Stela 6 from the category of feminine figures, though the only evidence that can be adduced for them is the somewhat dubious association of the figure on Stela 2 with the carving on the top of the

monument. This carving shows a curious small figure seated in some sort of vessel. The face is marred by erosion, but careful scrutiny reveals a rather unusual rendering of a prominent eye, which is similar to that on the child figure on Stela 3, and which may be an attempt to convey the idea of an infantile face. There is a possibility, therefore, that on Stela 2 we have a second instance of the association of a robed figure with that of a child. The subordinate position of robed figures to those of men, their elaborate attire, and their occasional association with children make it a natural inference that these figures represent the wives of the rulers portrayed on the faces of the monuments.

A different relation between male and female figures is suggested on Stelae 33 and 14. Here the robed figure stands in profile before a man or youth seated high in a doorway of a building or under a canopy (Figure 37.12, b). The motif is associated with inaugural dates, which begin new sets of records, and which I believe mark the accession of new rulers. Judging by the distance between the initial date and the inaugural date for Stela 33, which begins a very long reign, the ruler must have been a minor when he first took office. The robed figure can hardly have been his wife, and I think it is more likely that she is his mother or a female regent, whose presence in the composition is occasioned by his extreme youth. Unfortunately, we do not have the initial date for Stela 14, but I suspect from the character of the portrait of the incumbent that he also was a boy when he first took office.

The inscriptions on these stelae are largely destroyed, and the evidence of the female sex of the robed figures is much weaker than in the case of Stelae 1 and 3. Nevertheless, it seems significant that these figures hold the same sort of object as does the woman on Stela 1, a scroll with feathers issuing from one end, called by Morley an "aspergillum." This object is constantly associated with robed figures, and is seen again on Lintel 7 in front of a seated robed figure. Another minor point that may be indicative of the female sex of the figures on Stelae 33 and 14 is the peculiar form of their headdresses. It seems to be a sort of turban tied at the back and placed so high on the head that one concludes it must be fastened to a high feminine coiffure. The designs, however, are not particularly distinctive of women. The hummingbird sucking at a flower on Stela 33 (Morley identifies it as a fish, but surely in this he is mistaken) occurs both with male and with female figures at Yaxchilan. The figure on Stela 14 wears an animal skull, possibly that of a jaguar. While such symbols may be merely allusive and descriptive, some doubtless have family or clan significance and their distribution among figures in different sites deserves more attention than has been given them.

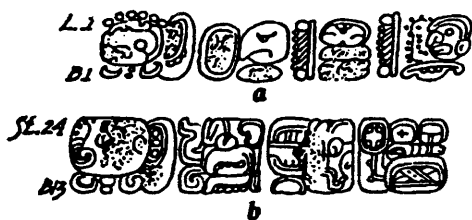


Figure 37.15. Glyphs identifying initial dates that are inscribed with figures of women but do not refer to them: (a) from Lintel 1 at Piedras Negras; (b) from Stela 24, Naranjo

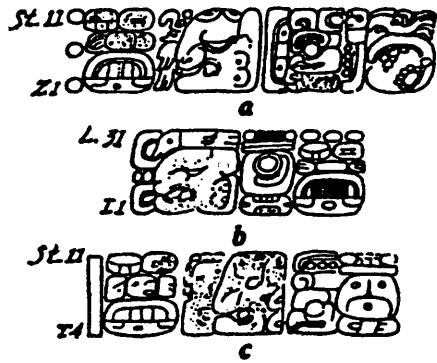


Figure 37.16. Phrases referring to rules of Yaxchilan: (a) the third katun of the Bird Jaguar, from Stela 11; (b) the third katun of the Bird Jaguar, from Lintel 31; (c) the fifth katun of the Bird Jaguar, from the base of the “human” side of Stela 11

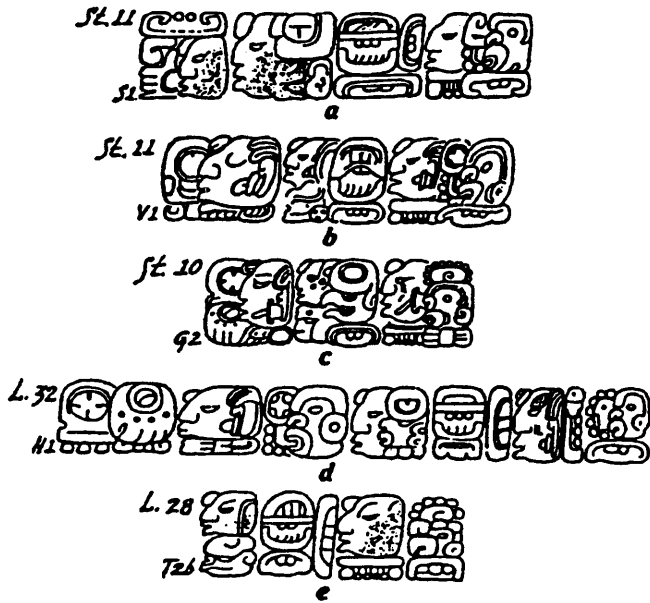


Figure 37.17. Glyphs referring to the companion of Shield Jaguar on Stela 11, Yaxchilan: (a) from base of the “human” side of Stela 11; (b) from upper panel of “deity side”; (c) from Stela 10; (d) from Lintel 32; (e), from Lintel 28

The robed figures considered so far, whether wives or mothers of kings, were all important and aristocratic personages. On Lintels 1 and 3, we find a humbler kind of figure, which is peculiar to Piedras Negras, perhaps because it takes part in a scene of larger scope than one usually finds represented at Maya sites. This figure wears only a skirt, without the *huipil*, but with a broad sash wrapped tightly around its torso. The skirt is narrow and is trimmed with a simple fringe. This appears to be the everyday dress of

a woman, and it seems unlikely that a man should wear it, even though ceremonial robes may have been alike for both sexes. The close association of the figure on Lintel 3 with children also suggests a woman's role. The children are being led forward into the presence of a chief by a man, while she stands modestly behind them with arms folded on her chest, as might a nurse who is temporarily relieved of her duties (Figure 37.21, a). One must admit that there are some puzzling items that demand an explanation. One is the strip of cloth that hangs below the hem of the skirt, like an end of a loin-cloth apron. This, of course, may be the end of the sash, but neither here nor on Lintel 1, where the figure is shown from the back, is the relation of this detail to the rest of the costume made entirely clear. The second dubious item is the absence of feminine head glyphs in the passages apparently referring to this figure. If the figure is that of a servant, however, her office may be indicated without reference to her person. The passage on Lintel 1 (Figure 37.15, a) begins with an upended frog glyph, and this glyph, making reference to the beginning of a lifetime, may in some way impute a relationship between the woman and a child. On both lintels the phrase ends with the glyph for God C, which is associated with the portraits of at least one very prominent lady at Yaxchilan (Figure 37.17).

The women of Yaxchilan are featured on many sculptured lintels and apparently play here a more important social role than at any other site in the Maya area. In many

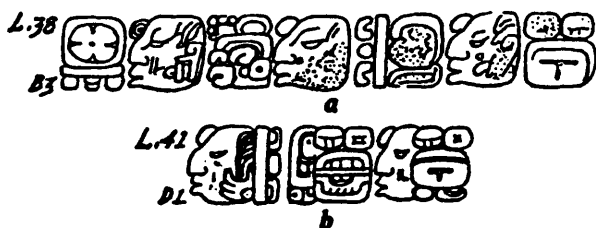


Figure 37.18. Phrases with feminine head glyphs, the numeral 6, and an *ik* element: (a) from Lintel 38, Yaxchilan; (b) from Lintel 41, Yaxchilan

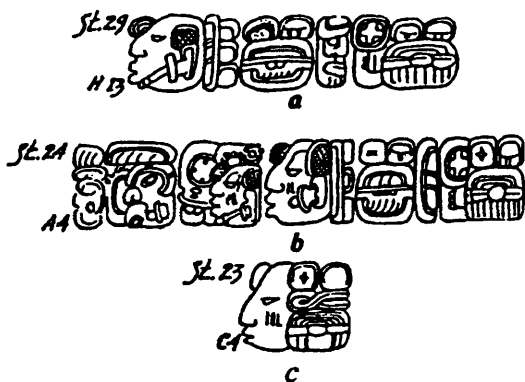


Figure 37.19. Appellatives of women from Peten sites: (a) and (b), phrases from Stelae 24 and 29 at Naranjo referring to the same woman; (c) an early reference to a woman from Stela 23, Tikal

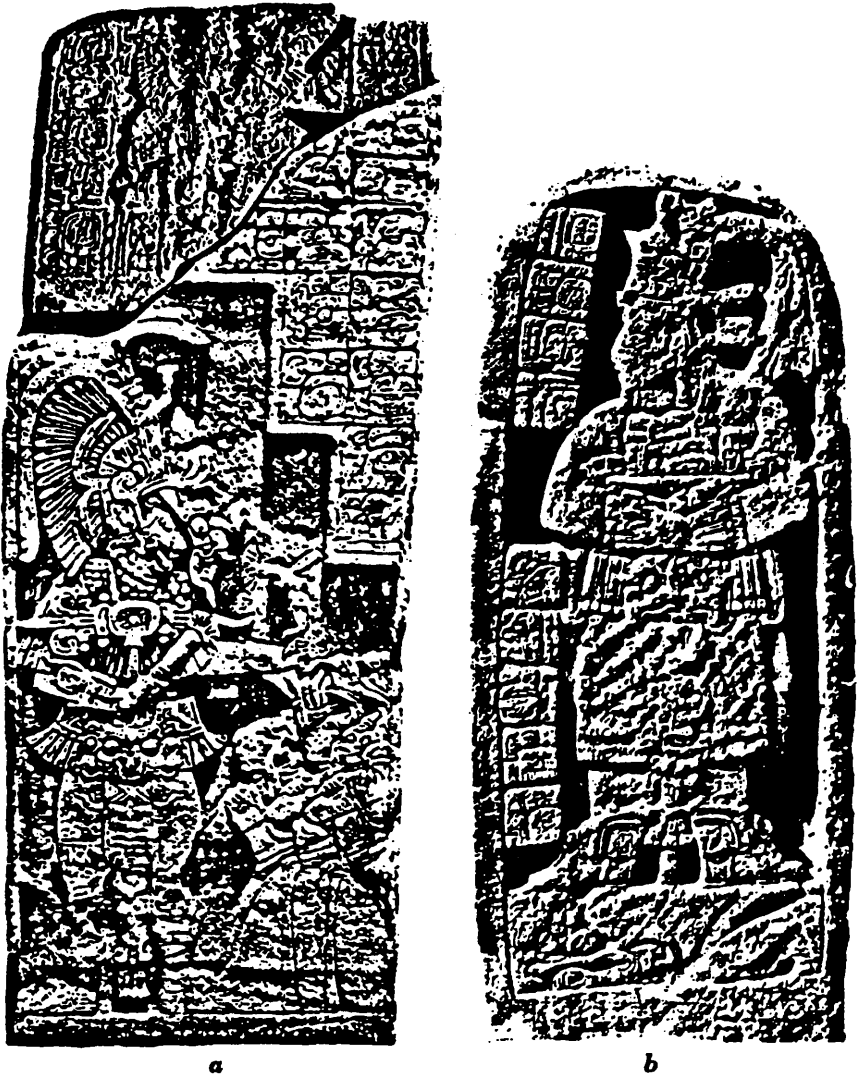


Figure 37.20. (a) “Deity side” of Stela 11, Yaxchilan: figure of Bird Jaguar and subjects below; above Shield Jaguar and consort (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University); (b) portrait of woman on Stela 24, Naranjo, and accompanying glyphs (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University)

compositions they share the center of attention equally with men, and their magnificently embroidered robes are depicted in the finest possible detail. Their physical characteristics are never stressed, but it would be a curiously insensitive eye that could ignore, in the portrait on Lintel 26, for example (Figure 37.21, b), the elegance of a feminine costume that leaves the shoulders artfully exposed. This figure’s pose, as she holds a helmet and shield, is so unmistakably uxorious, that even those who have been inclined

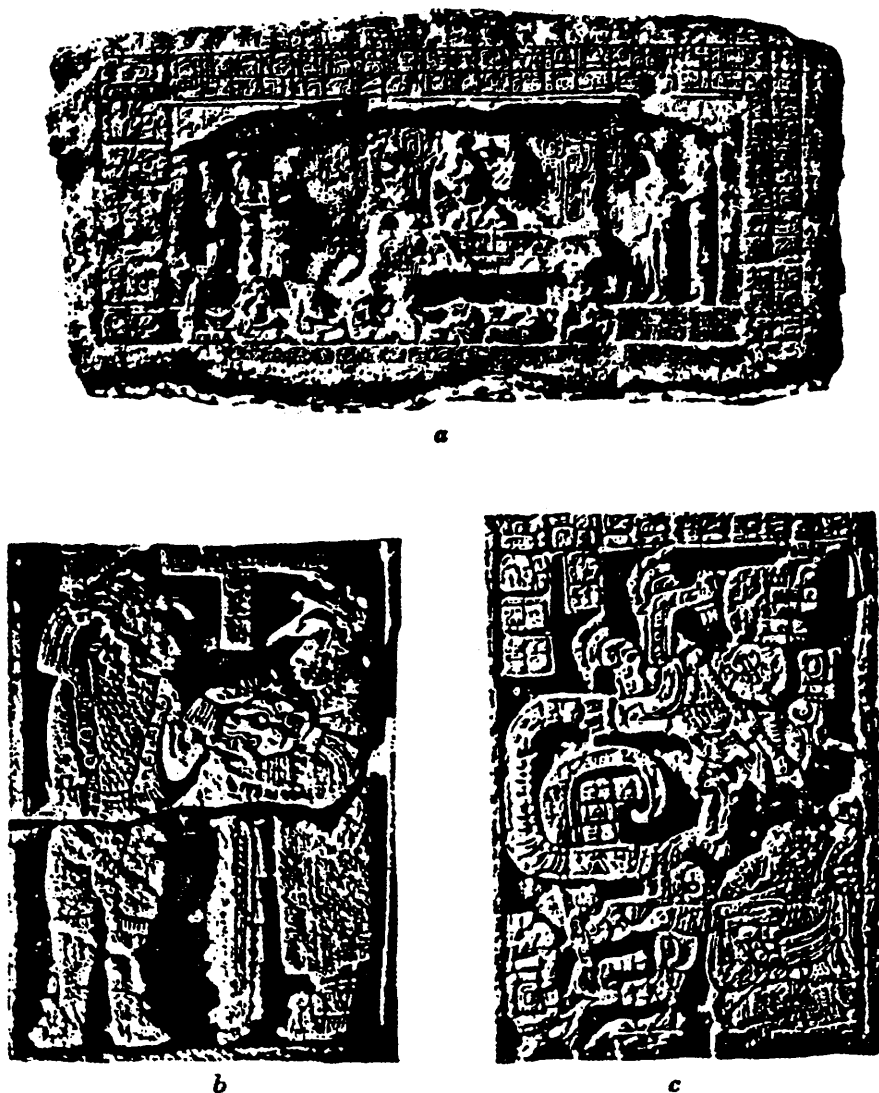


Figure 37.21. (a) Lintel 3, Piedras Negras, depicting an audience before a dignitary: at right, a family group including a woman (Courtesy of the University of Pennsylvania Museum); (b) Lintel 26, Yaxchilan: portrait of man and wife (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University); (c) cast (imperfect in some detail) of Lintel 25, Yaxchilan: the serpent motif with kneeling woman (Courtesy of the Peabody Museum of Archaeology and Ethnology, Harvard University)

to interpret other robed figures as figures of priests or suppliants, would probably concede to her the status of a wife.

All but a few of the figures of women at Yaxchilan are accompanied by hieroglyphic phrases containing several feminine head glyphs, usually placed close to them in a separate block. It is not as simple a matter as it may appear, however, to identify particular

individuals by these phrases. Many contain the same characters, but no two are exactly alike. Evidently, they include not only personal names, but also titles and family names that may be applicable to more than one person, as well as descriptive epithets and kinship terms that may vary for the same person. Such appellative expressions have never been adequately studied, but when their nature is more widely recognized, investigations of the system of Maya nomenclature may enable us to distinguish the persons portrayed on the monuments and perhaps even to determine their familial relations.

At present, the unsatisfactory reading of most of the dates at Yaxchilan, due to the fact that they are given only in Calendar Round notation, raises another serious obstacle to the identification of persons. Many of the values suggested by Morley are unacceptable both on stylistic grounds and in consideration of the texts. Berlin's recent work (1958) on the emblem glyph fortunately contains a pertinent suggestion as to how these dates might be placed in the Long Count. He notes that certain passages commonly occurring on lintels can be divided into two groups, one characterized by a jaguar glyph prefixed by a shield and followed by a glyph containing an *Ahau* element (Figure 37.16, c) and the other featuring a jaguar combined with a bird and accompanied by a glyph with a *Cauac* element (Figure 37.16, a). On Lintels 30 and 31, the bird-jaguar glyph follows immediately upon the identifying glyph of an initial date: 9.13.17.12.10 8 0c 13 Yax, and on that of an inaugural date: 9.16.1.0.0 11 Ahau 8 Tzec (Figure 37.16, b). If we follow the historical interpretation suggested for such notations at Piedras Negras, we conclude that the bird jaguar designates a particular ruler of Yaxchilan who took his office in 9.16.1.0.0, and we can expect that all dates associated with his name would be inscribed in the period of his reign, and would fall within his lifetime. There are still certain difficulties involved in the acceptance of this hypothesis, which I have discussed elsewhere (Proskouriakoff 1960), but I believe that the discrepancies are not serious enough to invalidate the view that the jaguar phrases refer to the rulers of Yaxchilan.

On Stela 11, the inaugural expression is repeated very clearly, though the name of the jaguar is somewhat damaged. The inaugural date 9.16.1.0.0 is inscribed twice in Initial Series. The figure on the so-called "deity side" of this monument, therefore, is almost certainly the portrait of the bird-jaguar ruler himself, especially since the phrase that identifies him occurs in the inscription just above the portrait (Figure 37.20, a).

In an upper panel, flanked by two columns of glyphs, are seated two figures, one male and one female. The column of glyphs next to the male figure is in part destroyed, but one can easily make out the jaguar glyph and the glyph with an *Ahau* element that always goes with the shield-jaguar. From other inscriptions we know that this jaguar is associated with dates in the previous two *katuns* and must designate the ruler who preceded the bird-jaguar, and who probably was one of his progenitors. The column of glyphs on the left of the pair apparently goes with the robed figure, and, as one might expect, contains three female head glyphs, the last of which is attached to the head of God C (Figure 37.17, b). Both phrases, with only minor variations, are repeated in the main inscription on the other face of the stela after the notation of the accession of the bird-jaguar (Figures 37.16, c; 37.17, a). The two figures of the upper panel, therefore, are best regarded as ancestral portraits, documenting the royal descent of the incumbent or his right to the succession.

It is more usual at Yaxchilan to present such ancestral portraits in cartouches of the sun, and sometimes of the moon, as on the back of this monument or on Stelae 1, 4, 6, 8 and others. I see no reason to interpret the cartouche as a sign of divinity, except insofar as the illustrious dead may be deemed worthy of special devotion. That the female figure does not represent the moon-goddess is amply proved by the fact that she appears in a solar as well as in a lunar cartouche. Perhaps the reason that the cartouches are omitted on the front of Stela 11 is that the persons were still living at the time, or perhaps for no better reason than that room was required for their names.

The name-phrase of the lady seated with the shield-jaguar (Figure 37.17, b) begins with a glyph containing a *kin* element attached to a feminine head. Elsewhere an *imix*-like form is added, and the glyph appears to be a title or a form of address, since it occurs in various phrases and is omitted seemingly at will. The second glyph, therefore, should be the one to identify the person, but is, unfortunately, not at all clear. Following it is a sky-glyph compound which occurs in appellative phrases both of men and of women. The last glyph is a feminine head with a suffix combined with the glyph for God C. This glyph resembles and may be an “emblem” glyph. It occurs, however, with curious frequency in connection with women. It has been noted on Lintels 1 and 3 at Piedras Negras, and Berlin (1958) has pointed it out with name-glyphs on the Palenque Sarcophagus.

The phrase ending with the God C glyph on Stela 11 occurs also on Stela 10 and Lintels 28, 32, and 53 at Yaxchilan (Figure 37.17, c–e), where it undoubtedly designates the same woman. Although there is a God C glyph on Lintel 38 also, other name glyphs follow it, and the expression is not clearly the same (Figure 37.18, a). On Lintels 32 and 53, where it is normal, the robed figure stands, holding a large bundle, in front of a man with a manikin scepter. Morley’s dates for these two lintels are more than 5 katuns apart, but stylistically they belong together, and I suspect that both record the date 9.15.18.7.13 7 Ben 16 Mac and celebrate the same event. The bundle motif recurs on Lintels 1, 5, 7 and 54 in connection with the rule of the bird-jaguar, and probably with dates ranging from 9.16.1.0.0 to 9.16.5.0.0. Here again, I feel we must reject the very early dates given by Morley for Lintels 5 and 7. The name phrases of the women differ on all these lintels, and it is evident that the figures do not represent the wife of the ruler—in any case, not the principal wife. At Bonampak, in the mural of Room 1, Structure 1, the woman who stands near a bundle in front of the throne seems to hold a subordinate place in the family group, and it may be that she is a marriageable daughter, whose dowry or bride-price is symbolized by the bundle.

Despite Landa’s observation that the women of Yucatan never shed blood in sacrifice (Tozzer 1941: 128), feminine figures at Yaxchilan are very often associated with a bloodletting rite. Its actual performance is depicted on Lintels 17 and 24, showing the woman kneeling as she passes a cord with spines through her tongue. The figure on Lintel 24 is undoubtedly that of the woman with the low-cut gown who holds her man’s helmet and shield on Lintel 26. A very fine scroll tattooed on her cheek serves to identify her. The ceremony takes place in the reign of the shield-jaguar, apparently in the fourth katun of his life. While not surely established, this seems to me to be a reasonable interpretation of the 4 ben-ich katun notation that accompanies the jaguar glyph. On Lintel 17, we see a similar sacrifice in the reign of the bird-jaguar, and I believe that this lintel

must be later than Morley places it. The presence of an Ix sign prefixed by a feminine head among the glyphs that refer to the woman suggests that she is the same woman that is portrayed on Lintel 43. On this lintel, the blood-sacrifice is not pictured in action, but is symbolized by a dish containing a sacrificial cord.

This way of representing the rite often goes with a serpent motif, which is always associated with the glyph of a hand holding a fish. The serpent is represented in various ways, but the significance of the motif apparently resides in the portrait of a man that it usually holds in its jaws. This motif occurs on Lintels 13, 14, 15, 25 and 55, and in a modified form on Lintels 38, 39, 40 and 51. It suggests to me something in the nature of a sacrifice performed in memory of a deceased person whose portrait appears in the cosmic symbol of the abode of the dead. Symbols of death are very prominent among the hieroglyphs on Lintel 25, which gives the clearest portrayal of this theme (Figure 37.21, c). Moreover, the first date given is 42 years in the past and does not refer to the woman or her sacrifice, which evidently takes place in the fourth katun of the shield-jaguar, on the date inscribed on the front of the lintel. To be sure, these vague indications are not sufficient to prove the import of these scenes, but an interpretation such as this has at least the virtue of being consistent with the spirit of Maya art, which surrounds an idealized portrait with cosmic symbols. This mode is vividly illustrated by the representation of death on the cover of the sarcophagus in the tomb of the Temple of the Inscriptions at Palenque, and one sees on the Yaxchilan lintels exactly this type of idealized portraiture in the person depicted in the jaws of a serpent, who has all the attributes of humanity that in Maya art distinguish the dead hero from the grotesque god.

When we turn from the art of the Usumacinta area to that of the Peten, we find a much less expressive style, as well as a distinctly different fashion in women's dress. Fortunately, both the Peten and the native Usumacinta fashions are illustrated at Palenque on tablets of almost identical composition: The Tablero de los Esclavos, the Tablero del Palacio, and an oval tablet in the west corridor of House E. The theme is essentially the same as on Lintel 26 at Yaxchilan. On the two "tableros" the chief sits in the center while a young man on his right holds his helmet, and a woman on his left, his shield. On the slave tablet (Ruz 1953, pl. 24), the woman is dressed in a long *huipil*, and a block of three glyphs just in front of her begins with a feminine head prefix. On the palace tablet (Séjourné 1952, p. 59) she wears a skirt covered by a beaded net, a beaded belt and a short cape, which is the usual costume of women in the Peten. The inscription does not make direct reference to her, but with the figure on the House E tablet, similarly dressed, except for a *huipil* worn under the cape, there are two human head glyphs, both probably feminine. Moreover, one of these glyphs is prefixed by a modified kin sign, which often opens phrases that refer to women at Yaxchilan.

The Palenque compositions clearly show that the beaded costume is equivalent to the robe or *huipil*, and a combination of the two is worn by the figure on the back of Stela 1 at Cancun, which, like Stela 3 at Piedras Negras, depicts a woman sitting on a throne on the back of the monument, with a standing male figure on the front. Instead of the short cape that usually goes with beaded costumes, this woman wears a more ample *huipil* of the same netted or beaded fabric as the skirt. In her hands she holds a ceremonial bar, which suggests that this symbol does not designate a particular office,

but indicates some ceremonial act or a general status of nobility. The composition of skirted figures in the Peten is formal and devoid of any suggestion of action or of the relation of the figure to others. A long hanging of beads suspended from a bat-and-shell ornament on the belt has misled some observers to identify the figures as those of men, but the analogy with skirted figures at Palenque and the repeated use with such figures of feminine head glyphs removes any possible doubt that they are women. Unfortunately, in the one scene, on the back of Stela 19 at Naranjo, in which a bloodletting rite is depicted, the costume of the figure is not clear.

On most monuments at Naranjo, the motif is merely indicated by the object the figure holds. On Stela 3, this object is the “*aspergillum*” like those that distinguish portraits of women at Piedras Negras. On Stelae 24 and 29, which probably represent the same woman, it is a bowl filled with some sort of ceremonial paraphernalia. A cord with one large bead in front, worn on the neck by the figure on Stela 24, is like those associated with scenes of sacrifice at Yaxchilan, and may imply an analogous rite (Figure 37.20, b).

Although the Naranjo stela presenting a female figure shows it standing alone, there is almost always a monument with a male figure that has the same terminal date and can be paired with it. Thus, Stelae 22 and 24, 30 and 29, 28 and 31 and 2 and 3 form definite couples. This pairing of skirted figures with those of men is very suggestive of the two sexes, and the contrast in the glyphic passages that go with the two kinds of figures makes the nature of the distinction doubly clear. On Stelae 24 and 29, evidently portraying the same woman, one combination of three glyphs occurs over and over again (Figure 37.19, a): (a) a female head glyph with a postfix in the form of a reversed numeral 6, which occurs also with the woman on Lintel 41 at Yaxchilan (Figure 37.18, b) and which may be equivalent to the Cauac glyph with a coefficient of 6 on Lintels 15 and 38; (b) a so-called “sky-glyph” which recurs constantly in appellative passages both with men and with women; and (c) the emblem glyph for Tikal, identified by Berlin (1958). These three glyphs follow the first, third, and fourth or last dates inscribed on the sides of Stela 24, showing that these dates all concern the same subject. The second date, on the other hand, is followed by a zoomorphic head and the emblem glyph most common at Naranjo (Figure 37.15, b). This date is the initial date which begins the inscription on the companion monument, Stela 22, and it dearly concerns the male figure. There is no corresponding initial date for the woman, but since an earlier date refers to her, she is doubtless older than the man, and one may infer that the relationship implied could be that of a mother and son. The inscription on the front of Stela 24 includes, in addition to the three glyphs used on the sides, a God C glyph and the glyph that was observed on the House E tablet of Palenque: a female head prefixed by a sign with a kin element (Figure 37.19, b). It is difficult in our present stage of ignorance about such glyphs to gauge the full significance of the astonishing similarity of this clause to some appellative expressions at Yaxchilan, especially that on Lintel 38 (Figure 37.18, a), but it certainly demonstrates conclusively the analogy between robed and skirted figures, and suggests a close relationship between the ruling families of distant cities.

It is evident that all the figures discussed so far share in a single complex that identifies the Maya woman. We can define this complex by listing its features in the order of their importance:

COSTUMES:

- a) Narrow, ankle-length skirt
- b) Long robe or *huipil*
- c) Beaded skirt with short cape

ASSOCIATION WITH OTHER FIGURES:

- a) Pairing with male figures in equal or subordinate role
- b) Association with figures of children, in the rare cases when these occur

HIEROGLYPHS:

- a) Phrases including one or more feminine head glyphs
- b) Association with initial dates of other persons

MOTIFS AND SIGNIFICANT OBJECTS:

- a) "Aspergillum" or scroll with feathers
- b) Bowl or basket containing ceremonial objects
- c) Bloodletting rite or cord in vessel
- d) Large bundle, sometimes marked with glyphs
- e) Serpent with human figure in jaws
- f) Throne
- g) Serpent bar (rare)

MINOR AND OCCASIONAL DETAILS:

- a) Low-cut gown, exposing shoulders (Lintel 26, Yaxchilan)
- b) Abnormally high placing of the headdress (Stelae 33 and 14, Piedras Negras)
- c) Central part in hair (Stela 3, Piedras Negras)

There remain a number of skirted figures of whose sex I am somewhat in doubt. Among these are the figures on Stelae 11 and 34 at Naranjo. These figures wear long skirts, but in addition strips of featherwork that completely cover the front of their garments. The figure on Stela 11 carries a staff and a shield, and what may be the end of a loincloth projects beneath the skirt. The glyphs on the front of this monument give no indication that the figure represents a woman.

Figures with long skirts are particularly ambiguous in Yucatan, where there is some reason to think that skirts were assumed by certain priests, possibly in deliberate imitation

of the feminine costume. In Toltec times, skirted figures holding dishes of offerings were often carved on the pillars of buildings or painted on their walls. Tozzer (1957: 110), in a characteristically thorough study of these figures, came to the conclusion that most of them are men, and I can see no cogent reason to question his view. These figures he classes as Maya, but the origin of the costume and the tradition remains obscure. Possibly, it goes back to such figures as that on Stela 1 at Tulum, which may represent a man in woman's garb. On the other hand, the figure on Stela 28 at Calakmul, which has many similarities to the Tulum figure, is clearly paired with its male companion on Stela 29, and shows in addition the outlines of a feminine head glyph in its badly eroded inscription.

The skirted figures of the Coba region are so like normal male figures in every respect, that Charlot described the long skirt as the norm for the male costume (Thompson, Pollock, and Charlot 1932: 185), ignoring the fact that the figures on Stelae 3, 6, 8, 15, 20 and 21, and the figure on the front of Stela 5 as well as others, probably, now badly eroded, wear only a short skirt or none at all. The long skirt is by no means the normal costume of men in this region, and I am rather inclined to class the long-skirted figures of Coba as feminine in spite of their ceremonial regalia. The aberrant Stela 17 almost certainly represents a woman. It is not paired with any male figure, but its unusual position suggests that it had been reset, and perhaps Stela 13, though it stands in another group, was originally a companion monument to it.

I can bring no glyphic evidence to bear on the sex of the well-known figure on Stela H at Copan, which some observers regard as the portrait of a woman, and others as that of a man. I can only point out that it is definitely paired with Stela A, facing it across the plaza in the same way as Stela 24 at Naranjo faces Stela 22. The inscription consists of only 8 glyphs and commences with a date which is mentioned also on Stela A, and is its earliest date. There is no justification for moving this date one calendar round ahead in order to read it as a tun ending, as Morley does in the *Inscriptions at Copan* (Morley 1920: 351). The "dedicatory" date on Stela A applies to both monuments, and it may even be that the inscriptions on both are to be read as one record.

All the figures of women mentioned so far, with the possible exception of that on Stela 17 at Coba, are of Late Classic date. Women do not appear on very early monuments and even among the profile figures that were erected at Tikal between 9.1.10.0.0 and 9.3.0.0.0 there are no portraits of women. They first begin to come in at this site with a drastic change of style that produced such monuments as Stelae 23, 25, 10 and 12, the earliest of which probably dates from about 9.4.0.0.0. The Initial Series on Stela 23 gives an initial date followed by a feminine head glyph with a twisted element and the emblem glyph for Tikal (Figure 37.19, c). The main figure, unfortunately, is too badly destroyed to show whether it represented a man or a woman, but in any case this seems to be the earliest attempt we know of group figure composition, for full-sized figures are presented on the sides. One of these may be a woman, for it has the peculiar stance of the figure on Stela 17 at Coba, and that on Stela 33 at Piedras Negras, which evidently prompted Morley to describe it as showing "pronounced steatopygia" (Morley 1937-38). There are not enough examples of this pose, however, to establish it as particularly characteristic of women. It is more certain that the figure on the preserved side of Stela 25 is that of a woman, for it is shown wearing a typical beaded costume.

These monuments, although they fall within the span of the Early Classic Period, have many other traits that become dominant as the Late Classic Period progresses. The archaeological sequence in Structure A-V at Uaxactún (A. L. Smith 1950: 26) reveals in this transition a gradual replacement of temples by buildings of the palace type and the appearance of women and children in burials, which clearly bespeaks the growth of secular powers. Such a trend is usually grounded in the consolidation of a hereditary aristocracy that lays stress on lineage, and we should not be surprised to find women playing an increasing role in ceremonial affairs. Debarred from most public exploits, they have an even greater stake than men in the prestige conferred by a distinguished kinship, and dynastic rivalries are often resolved by the marriage union, which in such circumstances acquires a public importance.

In the past there has been a tendency to read summarily interpretations based on a simple and realistic view of Maya representations and to stress the mystic nature of their religious symbolism. It is true that a heavy overlay of symbolic forms often obscures the Maya figure, but in the dual mode of Maya art the two are always quite distinct, and the simple realism of the figures addresses us in a universal idiom. This channel of communication should not be blocked by unnecessary preconceptions. It leads us directly to historical themes, to the struggle for power that characterizes all rising civilizations. On this simple assumption of a very common motive of monumental works, the simultaneous observation of texts and figures opens a broad field of study that has long lain fallow, and that may yield us a rich return in better understanding of what the Maya artist sought to express.

“Kakupacal and the Itzas”

David Humiston Kelley

The following paper was presented at a 1966 seminar on Maya writing that Alberto Ruz Lhuillier convened in Mexico City. This contribution effectively integrated the findings of Tatiana Proskouriakoff, Heinrich Berlin, and Yuri Knorosov by combining a historical perspective on Maya inscriptions with a phonetic reading of the glyphs. David H. Kelley was probably the first scholar to understand the compatibility of these lines of research, thereby advancing decipherment to a significant extent. In this article, he accomplished three things: (1) he read phonetically the phrase ka-ku-pa-ca-l(a), which appeared as a glyphic compound at Chichen Itza; (2) he argued that it was a personal name, kakupacal; and (3) he presented documentary evidence about such a person in texts from Colonial Yucatan.

Kelley was among the last students of Alfred M. Tozzer at Harvard University, where he obtained his Ph.D. in 1957 with a dissertation on trans-Pacific diffusion of the Mesoamerican calendar from Asia. The previous year he had met Yuri Knorosov at the International Congress of Americanists at Copenhagen. For Kelley, the meeting was momentous: Knorosov's presentation on Maya writing, along with several conversations, convinced him that Knorosov was on the right track (see Knorosov, this volume). In a subsequent article (1962a), Kelley applied Knorosov's methods—contributing to their support outside the Soviet Union—while at the same time finding new phonetic readings, not all of which agreed with proposals by Knorosov. The same year, in his article on Quirigua (1962b), Kelley was also the first to apply Berlin's and Proskouriakoff's ideas to other epigraphic contexts. With its short-lived dynasty, Quirigua was not especially well suited to the reconstruction of dynastic history, yet Kelley did extract useful and prescient observations about relationship glyphs. In 1976, Kelley published an extensive treatise on Maya writing that summarizes his ideas. A comparison of this volume with the earlier treatise by J. E. S. Thompson (1950) uncovers surprising points of divergence. Calendrics and astronomy, which occupied the major part of Thompson's volume, now clustered in a single chapter, while the rest of the book concentrated on noncalendrical texts. Kelley's volume remains a major resource, although much of it has been outdated by the rapid pace of current research. To us, it represents a magnificent, breathtaking view, but one that looks backward over a century of epigraphic achievement—Kelley's control over this material is second to none. In essence, the

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volume is less synthetic than exploratory and transitional, taking stock of recent advances (often idiosyncratically), but premature as a definitive source on Mayan script.

In a previous paper (Kelley, 1962a, pp. 304–6), I suggested that a series of five glyphs, occurring together frequently at Chichen Itza, should be read Kakupacal, the name of a “valorous captain of the Itzas.” In that study, the emphasis was on the nature of the Maya script, and the historical and glyphic context of the series had to be passed over lightly. In the present paper, the primary emphasis is on the historic meaning of this identification, but continuing differences of opinion as to the interpretation of the script make a brief summary of the phonetic evidence necessary. Hence, this paper contains 1) phonetic evidence for the reading *ka-ku-pa-ca-l(a)*; 2) contextual evidence indicating that this sequence is a personal name; 3) historic evidence referring to the known captain of the Itzas Kakupacal.

1. PHONETIC EVIDENCE

The Russian scholar, Yuri Knorozov, in an important series of papers, has attempted to show that some Mayan hieroglyphs are used in a purely phonetic way, in which two graphemes may be used to represent a single morpheme, and that such glyphs stood for an initial consonant and a following vowel. My reasons for accepting this view, in its general outlines, have been presented in detail previously (Kelley, 1962a). In the light of an extensive critique by Thompson (1963a), I would be prepared to admit the possible validity of an alternate reading of some variants of the month Mac (*ma/mac* rather than *ma-aac*), but otherwise stand by my previous views.

The glyph series which I read Kakupacal occurs fourteen times in the inscriptions of Chichen Itza, with some slight variations. In terms of Zimmermann’s transcription system, the most typical form would be 166–84:1302–1300–81–1320. In Thompson’s system, it would be 669.604.586:25:178 (with substitutions of T27 or T205 for T25, and of T254 for T178). T178 frequently, but not always, appears doubled. Three of these five glyphs appear in Landa, and the full phonetic value is given for all three of them. T669 is Landa’s *ka*, T604 is Landa’s *ku*, and T25 is Landa’s *ca*. Evidence outside Landa is particularly good for T604. The doubled form T604.604 occurs in the *Dresden* codex as a way of writing ‘quetzal,’ and T604:219 appears as ‘vulture.’ These meanings were apparently first recognized by Cyrus Thomas (1888), who read them respectively as *Kukuitz* and *kuch*. Seler (1892) read the quetzal group as *kukul*, and Thompson (1958a, p. 305) read simply *kuk*. I follow Knorozov (1955b, p. 89, nos. 164, 167) in reading *ku-k(u)*, ‘quetzal,’ and *ku-ch(e)*, ‘vulture.’ For other evidence on the interpretation of T219 as *che/ce*, see Kelley (1962a). Barthel (1955, p. 15) has identified the glyph as a bird’s nest (Yucatec *ku*) with eggs in it, an identification already made by Brasseur de Bourbourg (as pointed out by Barthel, 1964, p. 224). Although Thompson seems to think that T604 alone stands for ‘quetzal’ (*kuk*), the reading *ku* seems widely accepted. However, the glyph is not crucial between a phonetic or non-phonetic interpretation, since *ku* also means ‘god’ and can stand alone as a morpheme.

While there are a number of plausible readings of the glyph T669 as *ka* in various contexts, none of them is compelling in itself. Thompson (1950, p. 266) suggested several possible readings, including *et*, *mach*, and *kab*. Barthel first accepted the reading *et*, but now accepts *kab* (Barthel, 1964, p. 224). This is certainly the most plausible reading from an ideographic viewpoint, as *kab* means ‘hand,’ and the glyph is certainly a hand. Barthel points out that the sequence T669.602 would then mean ‘hand of god,’ a Mayan euphemism for the flint knife used in human sacrifice. He leaves the following sequence unexplained.

The best evidence outside Landa for the value *ca* for T25 is to be found in variants of the names for the months Zec (usually mis-written Tzec) and Mac. In virtually all compounds in which T25 is found, the fish-head or the full fish (T738) sometimes occurs as a substitute. For the month Zec, the *Dresden* gives Landa’s letter *c* followed by T25. Since *c* in Spanish is pronounced *se*, I have assumed that this is the correct reading, giving *se-c(a)*; the Spanish *z* was actually used to indicate a Yucatec Maya *s*-sound, so this is an exact correspondence. For the month Mac, one sometimes finds the compound T74:738. T74 is Landa’s *ma*, and T738 is the fish-head. Thompson, who first recognized a fish-head which seems to be read as *xoc*, ‘shark, count,’ identifies this fish with the *ca* fish (Thompson, 1944b, pp. 5–10).

I believe that the *xoc* head and the *ca* head can be distinguished despite many common characteristics. In a number of places where Thompson would read *xoc*, ‘count,’ I would read *ca*, ‘then,’ supporting Landa, although I have no clearcut proof.

This leaves two elements not considered by Landa. The final ‘inverted Ahau’ (T178) precedes the *kin* glyph (T544) in the long recognized glyph for ‘east.’ In Yucatec, the word for ‘east’ is normally *likin*, more rarely in religious texts *lakin*. Linguistically, one would assume that the form *likin* represents assimilation from *lakin*. If the sequence T178:544 represents ‘east,’ which is *lakin*, and if T544 is universally recognized as *kin*, it hardly seems to be stretching the evidence much to regard T178 as *la*. This is preferable on etymological grounds to *li*. De Rosny early suggested a reading *l*, *li*. Any alternative interpretation would depend on using some non-Yucatec word for ‘east.’ In any case, in terms of the interpretations made by Knorozov and myself, either *-l(i)* or *-l(a)* would be acceptable in the reading Kakupacal.

The only glyph in the series which is dependent on a reading first made by Knorozov is the identification of T586 as *pa*. Knorozov (1955b, p. 73, n 109) identified T715 as *pa*. This glyph differs from T586 only in the absence of the internal hatching of T586. Frequently, glyphs in the codices differ from those on the monuments only in the presence of cross hatching on the monuments where the equivalent in the codices are open. On the basis of a considerable number of plausible but not fully probable readings, I had accepted Knorozov’s reading of T715 as *pa*. The identification of T715 and T586 is implicit in Zimmermann’s classification of a cross-hatched glyph from the codices with the open ones (cf. Kelley, 1962a, p. 289).

Independently of the phonetic values, I had already decided that this 5-grapheme sequence represented a name. In terms of Knorozov’s studies, and of readings which I had fully accepted, this sequence could only be read *Ka-ku-pa-ca-l(a)*, i.e. *Kakupacal*. *Kakupacal* is known as the name of an Itza captain, and is apparently to be read *Kak-u-*

pacal, 'Fire-his-shield.' The etymological division *kak-u* does not coincide with the glyphic division *ka-ku*; this and the visual difference between T586 and T715 actually prevented me from recognizing this name even after I had decided that it should be a name.

The sequence T586:25:178 and its variants also appears in a number of other inscriptions. In these, it should be read *pacal*, 'shield.' Good verification of this is to be found at Palenque. Thompson regards T602 as a local variant of T586, with which I fully agree. Three parallel phrases from the Temple of the Inscriptions show that the sequence T602:25:178 may occur with a shield ideograph or that either this sequence or the shield ideograph may occur separately in otherwise similar contexts. To me this suggests the use of determinatives, in the Egyptian sense, in which the ideograph 'shield' and the phonetic rendering '*pa.ca-l(a)*' complement one another, so that either the ideograph distinguishes between two possible meanings of the word *pacal*, or the phonetic *pacal* indicates which of several words for shield is intended.

There is one piece of interesting but far from definitive evidence from Yaxchilan. Barthel has pointed out the parallelism of the sequence I read *pacal* and a passage on Lintel 46. There, at F8, is T1.44:669.586:25:178 and in G8 is T60:751. The text refers to the reign of "Shield Jaguar" (Proskouriakoff, 1963) whose usual glyphs are found in G5. Here G8 is the so-called "knotted Jaguar," and to find a phonetic series which I read *pacal*, 'shield,' preceding this seems to me suggestive, if somewhat puzzling.

All the evidence taken together seems to me to strongly support a reading *Kakupacal* for the entire series. To find a meaningful sequence of this length, composed entirely of phonetic glyphs, is the best possible type of support for the general thesis as to the nature of the Maya writing which is advocated by Knorozov. Given the importance of this problem, it seems desirable to assess the context as fully as possible, to see if there is really good evidence for regarding this sequence as a personal name.

2. T669.6.04.586:25:178 AS A PERSONAL NAME

In a previous study (Kelley, 1962b), I attempted to show certain features which seemed normally to be associated with personal names in the Mayan inscriptions. The clearest evidence for the present problem lies in the occurrence of the *Kakupacal* sequence immediately preceding a glyph containing T565. This glyph, with varying affixes, normally falls between two sets of names or titles. I have assumed that it denotes some sort of relationship; normally, but not always, a sexual relationship between a male and a female. If this is the case here, the following glyphs may be a woman's name. There is no compelling evidence for or against this later view.

Good evidence may be found in the relationship of the supposed *Kakupacal* glyphs to the 'fish-in-hand' glyph. Proskouriakoff (1960, p. 470) has pointed out that the latter is normally associated with a ritual or observance connected with a snake deity. The 'fish-in-hand' appears structurally as a verb in Classic Peten sites, and the subject is normally a historic individual, identified by recognizable names or titles. In the *Casa Colorada*, this verb appears in glyph block 20 and the '*kakupacal*' sequence in glyph blocks 22-23. I cannot explain the intermediate glyphs (which include *tut kinil 'imix' tu-----*),

but doubt that *kinil* is, here, 'day' and suspect it is, rather, 'priest.' Glyph block 24 opens with the mannequin death's head, which I regard as a variant of the masculine *ah*, and which characteristically appears in titles. Finally, in glyph block 25 is a so-called 'ahau variant' which is, I suspect, the Emblem Glyph for Chichen Itza. Such a sequence is most appropriate in connection with a personal name. The '*kakupacal*' glyphs also precede the putative emblem glyph in other cases, usually with an intervening glyph block.

At a more general level, this sequence of glyphs is the commonest sequence at Chichen Itza. In most other sites, the commonest glyphs, aside from known calendrical glyphs, are personal names or titles of rulers. To me, this has supporting weight in identifying this sequence as a personal name. In Barthel's interpretation, this involves frequently repeated references to the sacrificial knife. While it is clear that some of these texts refer to ceremonialism, as Barthel has clearly shown, such an extreme emphasis seems to me to go far beyond what we know from other Mayan sites, or from other parts of the world. Moreover, the evidence suggesting that any other glyphs at Chichen Itza are historical names is very scanty.

3. KAKUPACAL IN MAYAN HISTORICAL DOCUMENTS

It is an unfortunate fact that the documentary materials for Maya history are so inadequate and the state of Maya historiography so poor that there is very little agreement on the interpretation of the few sources we have. This disagreement extends even to the translation of the basic sources from Maya. There is general agreement on the role of *Quetzalcoatl-Kukulcan* as a Toltec who played an important part at Chichen Itza, but there is no agreement as to his absolute date, as to his relative date within the Toltec period, or as to his relationship with the Itzas. If we are to understand even the few historical references available to us, we must know who the Itzas were and we must have some sort of chronological framework. The latter question is tied in various ways to the correlation problem, although the relatively few attempts to use the material for this problem have been marred by naivete. The view that every time the Itzas are said to have left their homes, the site which they left was completely abandoned seems unlikely. The apparent intended chronology of the colonial Maya chronicles has been accepted with little examination.

An adequate study of the Mayan historical documents would have to include a discussion of all disputed points of translation, a consideration of the inter-relationships of our sources, a full analysis of both Mexican and Mayan sources on *Quetzalcoatl*, and a new study of the correlation problem. The much more limited attempt here is to present another interpretation, with mention of some of the opposing views and some of the reasons which may be presented for the variety of existing opinions.

A central problem for the present purpose is the interpretation of the evidence referring to the Itzas. They have been regarded as southern Mayas, intrusive among the Yucatecan Mayas during the Classic Period, as derived from Classic Period Yucatecan Mayas (both of which views imply that they represent the 'Chichen Itza Maya's of the Toltec period monuments), as the Chichen Itza Toltecs, or as one of several sorts of post-Toltec intruders. For Barrera Vásquez (Barrera Vásquez and Rendón 1948, p. 50), the Itzas

arrived in Bacalar between 415 and 435 a.d., and “discovered” Chichen Itza about 60 years later. They left Chichen for Chakan-putun between 672–692 and returned to Chichen between 968–987, katun 4 Ahau, which he identifies as 10.8.0.0.0 of the long count, in agreement with the Thompson correlation. He thinks that the Itza arrived for the second time at about the same time as the beginning of Toltec influence at Chichen Itza.

Spinden (1913, pp. 216 ff.) has a similar interpretation, as do several other Maya scholars. In these cases, the argument rests on assuming the essential accuracy of the chronicles in their present form. If the dated references to the Itzas put the Itzas at Chichen Itza during the Classic Period, then the Itzas must be Chichen Maya. The implicit argument is a compelling one, but the implicit premise that the dates are accurate seems much more dubious. Jakeman (1945, p. 166 ff.) points out that the Itzas, although called “foreigners to the land” are also called the rulers, the great men, the “lineages of the land,” in short, that they are identified as the priestly and ruling class. He likewise connects their name with that of Itzamna, an important culture hero and patron deity of the writing and calendar systems. He finally identifies them with the ruling class of the Mayas from the beginning of the Classic (or earlier?) onwards, but regards them as a distinct ethnic unit in the population. Jakeman suggests that they may have originated in the Tabasco region, and were perhaps originally speakers of Chontal “or perhaps an ancient extinct language of that region before its occupation by the Chontal Mayans” (Jakeman, 1945, p. 185).

Barthel (1964, *passim*) thinks the Itzas were a group of Cholti, from the Palenque region, who were responsible for the Mayan inscriptions at Chichen Itza. He claims to read “*Ti-ch’een*” as a primitive form of Chichen. However Classic Period *ti* remained *ti* in Yucatec, and Yucatec *chi*, ‘mouth,’ has parallels in *ch* forms in other Mayan languages, so the proposed equation is linguistically impossible. He also claims to recognize the ethnic name *Chol-ti*, with a more doubtful reading of “Itza.” In spite of the fact that I am in essential agreement with his conclusions, I am unable to accept any of these three readings as valid. The more general statement of similarities between the pre-Toltec inscriptions of Chichen and the inscriptions at Palenque is, however, entirely valid.

According to Tozzer (1957, I, p. 36), the Itza “have most often been regarded as ‘foreigners’ who occupied Chichen Itza during the Tula-Toltec period and were responsible for ‘new Chichen.’” This “conventional” view has probably rested mainly upon the facts that the most impressive materials from Chichen Itza are those of the Toltec period, that the name of Chichen Itza is so intimately connected with the Itza, and that the Itzas are referred to as speaking brokenly. It is also often based on chronological reinterpretations of the Mayan chronicles. Probably the strongest proponent of this view has been J. Eric Thompson, who states it well, and adds several additional arguments (Thompson, 1954, pp. 98–100). He quotes the statement that *Kukulcan* came with the Itzas, assigns the coming of both to a katun 4 Ahau which he dates from 967–987 A.D., and points out that some scholars have favored 978 A.D. as the date for the expulsion of Quetzalcoatl from Tula. Thompson likewise points out that the *Chumayel* refers to the Itza emblems as the bird, the flat precious stone, and the jaguar, and that the bird and the jaguar are very important in Toltec representations at Chichen Itza. While there can be

no doubt of a special prominence attached to these symbols at Chichen, the jaguar throne is already characteristic of Classic Maya sites, and even birds are not completely absent. Thompson wavers between the view that the Itza are true Toltecs (of the highlands) and that they are “thoroughly Toltecized” Mayas, perhaps Chontal.

Tozzer (1957, I, p. 1) writes, “According to the theory offered here, the Itza are not to be identified with the Toltec, who entered the country and left their unmistakable imprint on Chichen, beginning about 1000. They are here regarded as a relatively unimportant Mexican group who arrived in the city a few years after it had been ‘destroyed’ about 1200.” This view depends on various rearrangements of the entries in the chronicles, and agrees to a large extent with Roys, although there are some differences of interpretation. Roys (Pollock, Roys, Proskouriakoff and Smith, 1962, pp. 40–41) points out that the Itza were called *dzul*, ‘foreigners’ and *u nunil Ah Itza*, ‘the Itza who speak our language badly,’ remarking that *nunil* is an obvious borrowing from Nahuatl *nontli*, ‘dumb,’ but that their literature indicates a Maya cultural background.

Roys (p. 45 and elsewhere) points out that the Xiu were anti-Itza, whereas the Cocombs don’t seem to have been. To me, this suggests a quite different interpretation than has been customary. The Xiu have a Mexican name, and their account of their origin, in the chronicles, mentions Tulapan and Chiconauhtlan, Nahuatl names, as places from which they came. The word which they use to say that the Itza speak badly is identified by Roys as a Nahuatl word. The Cocombs, on the other hand, have a Mayan name, and, in general, seem more Mayan, although there are some indications of claims of Mexican descent among them, too. I would suggest, therefore, that the description of the Itza as “foreigners” is from the viewpoint of the Mexican intruders, represented by the Xiu. People seldom think of themselves as the foreigners even when they are in a new land. I would also suggest that the original language which the Itza spoke badly was Nahuatl and that they spoke it badly because their native tongue was some Mayan language, probably Yucatec. The fact that the Itza “captain,” Kakupacal, has a thoroughly Mayan name supports the view that the Itzas were Mayans. The contrast with the “Seven Men of Mayapan” and their Mexican names is marked.

While we have relatively little information about *Kakupacal*, he is mentioned in a number of seemingly independent sources. López de Cogolludo (1954, vol. I, p. 352), in his relation of deities, says that there was one “. . . que fingieron traia en las batallas una rodela de fuego, con que se abroquelaba, llamado Kakupacal, vista de fuego.” The account of Gaspar Antonio Chi (a Xiu source), repeated in a number of *Relaciones de Yucatán*, has been reconstructed and translated by Jakeman (1945, p. 97) as follows: “the inhabitants of the said town (of Itzamal) were conquered by Kak-u-pacal and Uilu, valorous captains of the Itzas, formerly of the city of Mayapan.” In one of the versions, the name of Uilu was miscopied *cien*, and Kakupacal has been supposed to have had a full hundred Itza captains under him. Jakeman’s reconstruction makes it abundantly clear that the “100 Itza captains” never existed. In the *Relación de Motul*, it is said that Motul was conquered 140 years after it was founded. “Al cabo de los bino contra el señor que entonces hera del dicho pueblo de mutul otro señor y capitan llamado Rarupacal, con gente de guerra y le mato y despoblo al pueblo.” Tozzer’s translation (ed. Landa, p. 24, Ln. 129) is “at the end of which time they turned against the leader who then was another

leader and captain of this pueblo of Motul called Kakupacal. With warriors they killed him and depopulated the town." It seems to me, however, that a more reasonable translation would make Kakupacal the conqueror rather than the conquered. Since we do not know when Motul was supposed to have been founded, the apparent precision of the date of Kakupacal in that account does not help us much.

Kakupacal and his companion, Tec Uilu, recur in the third chronicle of Chumayel (Chronicle V, of Barrera Vásquez and Morley, 1949, hereinafter referred to as "the fifth chronicle"). The translation by Barrera Vásquez is followed, save for the omission of interpretative remarks and the correction of Kakupacal to Kakupacal, which is what the sources have. Since *pacal* is now known to be a word for shield (Roys, 1962, p. 51) and to bear a fiery shield (Barrera Vásquez and Rendón, 1948, p. 72), there seems to be no justification correcting the texts from *pacal* to *pacat*. The fifth chronicle reads "8 Ahau, this is the katun when they established themselves, the remainder of the Itza, who went under the trees, under the bushes, in Tanxulucmul, thus the place is named. From there they proceeded, when they established themselves in Sacactun Mayapan, thus the place is named. In tun 7 or 8 Ahau, the katun, this same is the katun in which Chakanputun died because of Kakupacal and Tec Uilu." (This fifth chronicle has more names and more precise dates, with none of the strange repetitions found in Chronicles I–III, which are actually three copies of a single document.) These factors indicate that the fifth chronicle is more reliable than the others. This chronicle dates the arrival of Bishop Toral in tun 6, of katun 9 Ahau. Since we know Toral arrived in 1562, simple calculation puts "tun 7 of 8 Ahau" in 1189. However, this would be impossible in terms of the usual placement of the katun 13 Ahau which ended about the time of the Spanish conquest. Because of this, and because the three copies of the first chronicle were formerly regarded as three independent documents, the testimony of the first chronicle has usually been preferred. The three versions have been given separate numbers by Barrera Vásquez and Morley, but here all are referred to as 'the first chronicle.'

The first chronicle differs radically from the fifth chronicle. Most events are put in different katuns by the two sources, and some events which have a single clear date in the fifth chronicle seem to have multiple dates, sometimes 260 years apart, in the other chronicles. Events put in katuns 1 Ahau by the fifth chronicle are put in katuns 8 Ahau by the first chronicle. These distortions suggest the use of two (or more) different katun counts. For this reason, it is difficult to equate events in the chronicles with assurance. According to the first chronicle, the *paxci Chakanputun*, the 'abandonment' or 'depopulation' of Chakanputun, occurred in a katun 8 Ahau placed from 928–948. I believe that this 'depopulation' of Chakanputun corresponds to its 'death' by Kakupacal and Uilu, assigned to the same katun name, but placed at 1189, a 260-year cycle later.

At any rate, it seems quite clear that there was a tradition of two Itza captains named Kakupacal and Tec Uilu who were responsible for the conquest or depopulation of Motul, Itzamal, and Chakanputun, and who established themselves at Mayapan. They were associated with Chichen Itza in our sources only in the sense that any Itza leaders might have some connection with the settlement which bears their name. Since archaeology indicates that the Mayapan settlement belongs principally to the post-Toltec period, and since I think the fifth chronicle is the most reliable source, I am inclined to

accept the 1189 date for Kakupacal. I would presume that the presence of the Itzas indicates a Mayan resurgence.

The inscriptions from the monuments at Chichen Itza which have been interpreted as mentioning Kakupacal have a very restricted chronological distribution, from 10.2.0.15.3 to 10.2.12.2.4, a period of less than twelve years. All fall in katun 1 Ahau. This interpretation depends on acceptance of Thompson's "new method" for reading Yucatecan dates (Thompson, 1937), which seems to me entirely reliable. In the Thompson correlation, they range from 869 to 881 A.D., in the Spinden correlation from 609–621 A.D. If the chronicles could be relied on for their dates, either of these would be too early for the companions Kakupacal and Tec Uilu. However, I have emphasized the notorious untrustworthiness of the dates in the chronicles, and the correlation problem is still far from settled. As long as only the name Kakupacal is known, I do not think we can be sure whether this is the same individual known from the historical documents, or some predecessor of the same name. If we could find the name of his associate, Tec Uilu, in the inscriptions, it would go far to support the view that the same individual is mentioned, and that the chronicle dates are wrong.

One does find, in close association with '*kakupacal*' the glyphs T35:568. T568 has been widely regarded as associated with sacrifice, but I have followed Knorozov in reading it *lu*. It is by no means certain that T35:568 refers in any way to a personal name; judging solely by our present limited knowledge of context, I would have been inclined to think it a title of Kakupacal and others. As a speculation, I would suggest that it might be *Uilu* (probably to be read *wi-lu*, or *bi-lu*, not *u.il.u*). In the Monjas, it directly precedes the glyphs which I read *ah kak*, 'the burner,' and which seem to be associated with fire-drilling ceremonialism.

Glyphs which frequently follow those of *Kakupacal* are T669:117.178, which seem to be a title or qualifying phrase. These should be read *ka-la*, but I do not know what the word may be. In the fifth doorway of the Monjas, this sequence follows '*kakupacal*' and immediately precedes the T35:568 sequence previously mentioned.

One minor item supporting the view that the "Chichen Maya" were the Itzas is to be found in the glyph sequence: IV:559:528. (Yula I, B5). I accept Knorozov's reading of this as *can tzue*, the 'four groups' (Knorozov, 1958, p. 285, n914). According to Barrera Vásquez and Morley (1949, p. 47), *cantzuculcaboo* was an older name of the Itzas. It derives from this root 'four groups.' Unfortunately, I have not been able to make much of the context of this reference. The statements about the 'four groups' in the fourth chronicle suggest that the term was particularly applied to migrating Itza groups, but this may not have been the older usage. For those who maintain a more ideographic viewpoint, this is probably simply another version of the glyph for 'turkey' with the graphemes reversed. I will leave it to those who hold this view to explain the possible meaning of 'four turkeys' in this context.

If these inscriptions do, in fact, chronicle the deeds of that *Kakupacal* known from the documents, we may expect to find some record of warfare and conquest in them. Hopefully, there should be references to place names, perhaps even Chakanputun, Motul, or Itzamal. However, I have so far been unable to detect probable place names, much less identify them. The early texts associated with the name of Kakupacal in the *Casa*

Colorado seem to be associated with fire-drilling and other ceremonies, rather than war and conquest. Barthel (1955, p. 10) has drawn attention to the glyphs which he reads *nabte*, 'spear,' and which he associates, very reasonably, with war. In the *Akabitzib*, the jawbone and fan glyphs, which Barthel (1964, p. 228) has shown are symbols of authority, are followed by a glyph with an axe (bat) prefixed, followed in turn by *nabte*. Barthel and I agree that the 'moon' glyph preceding the jawbone and fans is to be read as *kalaan* 'ruler,' although I do not accept the prefix as *ah*. Preceding this is the 'imix variant' which I have suggested is to be read *ba* with a knot suffix, which I think is *tab*, 'tie,' thus giving the title *batab* (known in similar contexts from the bones texts of Tikal). Thus, most of these glyphs seem to be titles. *Nabte* is a known Yucatecan family name, so the context here suggests this use, rather than a reference to war as such. Of course, 'spear' is not apt to be a personal or family name in a society where war is unimportant. Thus, despite reference to 'fire,' 'spear,' 'axe' and 'jawbone' I can find no clearcut references to war and conquest.

Although I have previously drawn attention only to those references suggesting that *Kakupacal* was the name of one or more historical individuals, there is some evidence that the name was also applied to a deity.

Barthel (personal communication) has drawn my attention to *Dresden* 36a where God B is shown holding a shield from which seems to come smoke or flames. This might suggest that "Fire-his-shield" was some sort of euphemistic name or title of God B. However, the god is holding a torch in his other hand and the flames apparently coming from the shield may well be thought of as deriving from another torch in the hand hidden behind the shield. The mere association of a shield and a torch seems insufficient to justify an equation with *Kakupacal*, since they might be equally well associated with any deity making war. Interestingly, the glyphic equivalent of this combination is found on Copan, Stela A at B9bl, which I would read T122.624 (although apparently not so read by Thompson). T122.624 in this context may be part of a personal name. The reading *Kap-pacal* is tempting and offers some support to thinking that T122 alone might (sometimes?) be *kak*. If the u is held to be implicit in such an ideographic compound, this conclusion would affect a variety of problems of decipherment.

CONCLUSIONS

The presence of the name *Kakupacal* in the inscriptions of Chichen Itza validates the view that the Mayan inscriptions of Chichen Viejo were the work of the Itzas. Even if the name were borne by more than one Itza captain, it is unlikely to have been borne by individuals of completely foreign groups. However, neither the chronology nor the deeds of the *Kakupacal* of the chronicles seem to coincide with the *Kakupacal* of the inscriptions on present evidence. The only remaining evidence suggesting their identity is the inherent improbability that the individual most prominent in the inscriptions of Chichen Itza should be distinct from one of the few prominent figures of the historical tradition of later times who bore the same name.

“Lords of Palenque: The Glyphic Evidence”

Peter Mathews and Linda Schele

This article represents an excellent sample of work by the “Mesa Redonda” group, which coalesced at a series of meetings at Palenque (and later at Dumbarton Oaks) during the 1970s. The story of those meetings and of the people who enlivened them is ably discussed elsewhere (M. Coe 1992). In retrospect, “Lords of Palenque” has worn well. The paper is crisply argued and textually rigorous, but shows great creativity in determining probable equivalences of verbs; prompted by suggestions from David Kelley, it also applies phonetic values for certain signs. Yet it may be exaggeration to regard “Lords of Palenque” as an epochal advance on prior work, as some scholars have suggested (Coe 1992). As Mathews and Schele indicate, much of the research follows leads by Heinrich Berlin (1959, 1970b). Today the basic dynastic outline in the paper remains intact, albeit with a few modifications in personal names (given Chol equivalents by the Mesa Redonda team). Subsequent work and new archaeological finds have led to greater understanding of subordinate figures at Palenque and Palenque’s relations with other dynasties.

In view of the data presented to the Primera Mesa Redonda de Palenque by Linda Schele (1974), it was decided to further investigate some of her conclusions by examining all the hieroglyphic texts of Palenque to see what could be determined about the rulers of Palenque. This paper is a presentation of the findings and glyphic evidence of the investigation.

Heinrich Berlin (1959 and 1970b) and George Kubler (1969 and 1972) were perhaps the first to identify ‘name glyphs’ of rulers at Palenque. Kubler (1969: 20–22) identifies the glyph group T74.184.624a or b as the name of a ruler whom he calls “Sunshield,” and correctly suggests that his birth date was 9.8.9.13.0 8 Ahau 13 Pop in the Maya Long Count, and his death as 9.12.11.5.18. 6 Etz’nab 11 Yax. Ruz (1954: 94) had previously implied that this latter date was the death date of “Sunshield.” In a later paper, Kubler (1972) suggests that the name glyph of “Sunshield’s” successor was T74.184.762; he calls this personage “Jaguar-Snake” due to the apparent fusing of elements of those animals in the T762 glyph.

Written in 1973 by Peter Mathews (1951–) and Linda Schele (1942–98). Reprinted by permission. Not for further reproduction.

In his article on the Tablet of the 96 Glyphs, Berlin (1970b) identifies four lords at Palenque, whom he calls "Subjects A, B, C, and D." His Subject A is the same lord as Kubler's "Sunshield" and is "Prominently linked . . . with the old dates 9.8.9.13.0 and 9.9.2.4.8" (1970b: 140). Berlin also made an important step when he identified the association of the prefix compound T74.184 with important personages or Lords at Palenque. There is additional evidence from other sites which substantiates such a view. Proskouriakoff's (1960) Series 7 ruler of Piedras Negras, for instance, usually has as his name glyph T74.184.1083b. On Chinikiha Throne 1, there is an 'accession' of a lord T74.184.757; unfortunately the date is not certain. Indeed, all examples of the 13 glyphs which occur with the T74.184 prefix in Thompson's *Catalog* (1962) could reasonably be personal names or title glyphs.

With all this in mind we went through the Palenque texts looking for the glyph groups beginning with the compound T74.184 and tying them to the dates apparently associated with them. A great number were found covering the reigns of six Palenque rulers. Other names and associated dates without the T74.184 compound were also identified; we are convinced they are alternate names and/or titles of various rulers of Palenque (Figure 39.1).¹

LORD SHIELD-PACAL

David Kelley first pointed out to Mathews the probable existence of a ruler at Palenque with the name *Pacal*. This ruler is Kubler's "Sunshield" and Berlin's "Subject A." His principal name is the T624 a or b 'shield' glyph. Frequently his name glyph is accompanied by a complementary glyph group (T586 or 602 or 1014 'd' or 1023 or :25 or 205:178) which should be read as '*pa-ca-l(a)*.' David Kelley has proven the *pa-ca-l(a)* reading beyond any reasonable doubt. It is, however, appropriate to discuss here the variant form of the glyphs which are read *pa* and *ca* (Figure 39.2).

The codex form of *pa* is T715, a plain cartouche; *pa* appears on the monuments with a cross-hatched center (T586). We agree with Thompson (1962: 215–216 and 226–227) and Kelley (1968a: 257) that T602 is a local variant or T586. The head variant of this glyph is that of an old personage with toothless gums, and is quite possibly, as Michael Coe indicated to us (personal communication), the head of God N in one of his aspects. For this reason, we transcribe the head variant as 'T1014d'; Thompson merely calls it 'T602P.' It also seems that a younger head can occasionally be substituted; possibly this is T1023. At any rate, the important feature is that the two heads, like T586 and T602, are almost entirely cross-hatched.

The *ca* 'comb affix' (T25) has as its head form a fish head. A word for fish in Yucatec is *cai* or *cay* and in Chol *chay*. We have no doubt that the correct reading for T25 is the phonetic *ca*. The head variant is T205, an 'affix' in Thompson's *Catalog*; he has no 'main sign' for it, although we suspect that some of his *xoc* fish heads (T738) are actually *ca* heads, just as some of his T205's are *xoc* heads.

Michael Coe referred us to the following entry in the Vienna Dictionary: "Escudo, amparo de cuerpo: *chimal*, *pacal*" (1972: 97v.). David Kelley (1968a: 258) suggests *pacal* as a phonetic complement of the T624 shield glyph. We believe that *pacal* was the personal

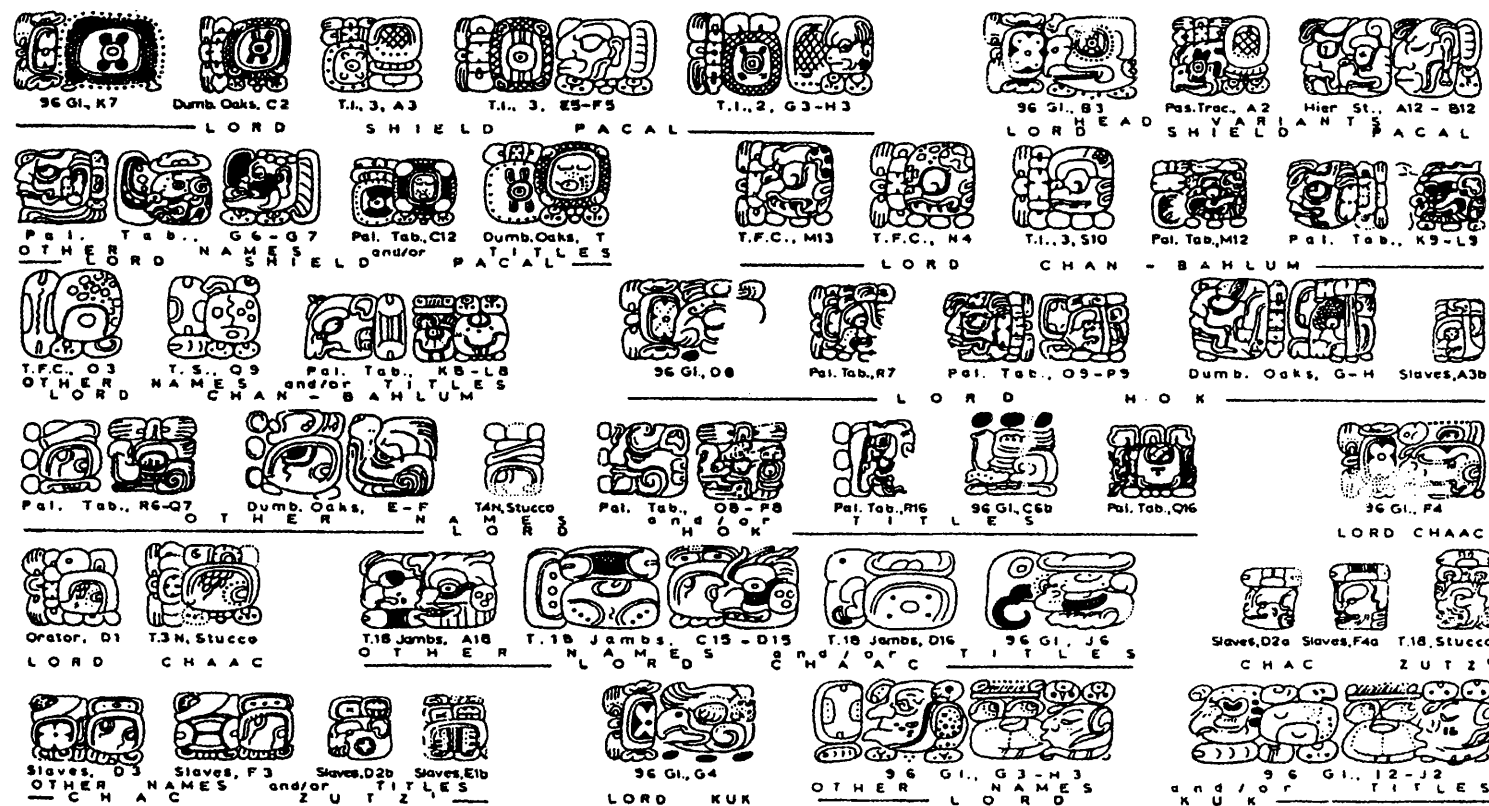


Figure 39.1. Lords of Palenque



Figure 39.2. Other glyphs discussed in this paper

name of our first ruler. In later times other important Palenque personages may either have inherited or adopted the Pacal name. The latest known Palenque inscription, the Carved Initial Series pot from Group 3, contains a *pacal* glyph group at H4. We will henceforth refer to this first lord of Palenque as Lord Shield Pacal.

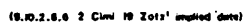
BIRTH DATE	'BIRTH'	OTHER NAMES and/or TITLES(?)	NAME	PALENOUE E.G.
ORD SHIELD PACAL  A7-B8 C7-D8 (1.S.) 9.8.9.13.0 8 Ahau 13 Pop	 A9		 B9 A10 Lord Shield Pacal	 B10
.1. AB.3  E3 F3 (9.8.9.13.0) 8 Ahau 13 Pop	 E2		 F2 Lord Shield Pacal	
.1. SARC. ID EDGE.  1 2 (9.8.9.13.0) 8 Ahau 13 Pop	 3		 8 Lord Shield	 8
IAS. WAC.  A1 (9.8.9.13.0 8 Ahau missing) 13 Pop	 B1		 A2 Lord Shield Pacal	
ORD CHAN-BAHUM  P12 Q12 (9.10.2.6.6) 2 Cimi 19 Zotz'	 P13			
T.F.C.  (9.10.2.6.6 2 Cimi 19 Zotz' implied date)	 H2	 O3	 H4 Lord Chan-Bahum	 O4
ORD HOK  A13-B14 A18 (18.)9.10.11.17.0 11 Ahau 8 Mac	 C4	 C8 D8 C9		
ORD CHAAC  B5 A13 9.12.6.5.6 3 Lamat 8 Zac	 B13 A14			
CHAC ZUTZ'  B4 9.11.18.9.17 7 Caban 15 Koyab	 A4a		 A4b 7 - Zutz'	

Figure 39.3. Birth clauses of the lords

Proskouriakoff first associated T740, the “up-ended frog” glyph, with the ‘initial’ date of a person. We accept Kelley’s reading for the T740 glyph as ‘birth.’ T740 occurs in rather disconcerting profusion at Palenque, and with the birth dates of some of the rulers there is still confusion. In the case of Lord Shield Pacal, however, there is no problem; his birth date occurs four times in the Palenque inscriptions (Figure 39.3), and each time the date is immediately followed by a clear ‘birth’ glyph group, T740.181.125 or 246. or 125 [88].

On two of the texts (Palace, House C, hieroglyphic Stairway and T.I. Tablet 3), the ‘birth’ group is followed by ‘Lord Shield Pacal’; the Hieroglyphic Stairway then has the Palenque emblem glyph. The third occurrence of Lord Shield Pacal’s birth is on the T.I. Sarcophagus Lid edge. Here the first five glyphs (1–5) record ‘8 Ahau 13 Pop/birth/6 Etz’nab 11 Yax.’ Three glyph groups later ‘Lord Shield Pacal’ appears followed by the Palenque emblem glyph. As we shall see later, 6 Etz’nab 11 Yax is the date of Lord Shield Pacal’s death; the close association of “Lord Shield” to the two dates above leaves no doubt that the ‘birth’ which occurred on 8 Ahau 13 Pop is his.

The fourth reference to the birth of Lord Shield Pacal is on a fragmentary text which we present here for the first time (Figure 39.4) with the kind permission of Ian Graham of the Peabody Museum, Harvard University. This piece was exhibited at the Pasadena, California Art Museum in 1966 at which time a tracing was made of the slab and sent to Mr. Graham. The slab has since disappeared. The stone almost certainly comes from Palenque and is obviously a fragment of a larger tablet. The first glyph group on the slab records ‘13 Pop,’ followed by ‘birth,’ and then by a bird head and the glyph great *pa-ca-l(a)*. The bird head is very similar to the bird head at B3 of the Tablet of the 96 Glyphs, which has infixed in its eye the shield glyph T624a. Berlin believes (1970b: 140) that the shield-eyed bird is a reference to Lord Shield Pacal. The bird head in the ‘Pasadena Tracing’ has several elements of the shield glyph around its eye, we strongly suspect that

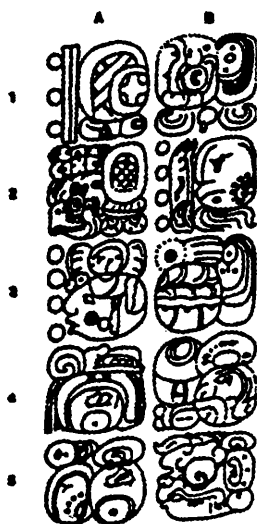


Figure 39.4. The Pasadena Tracing

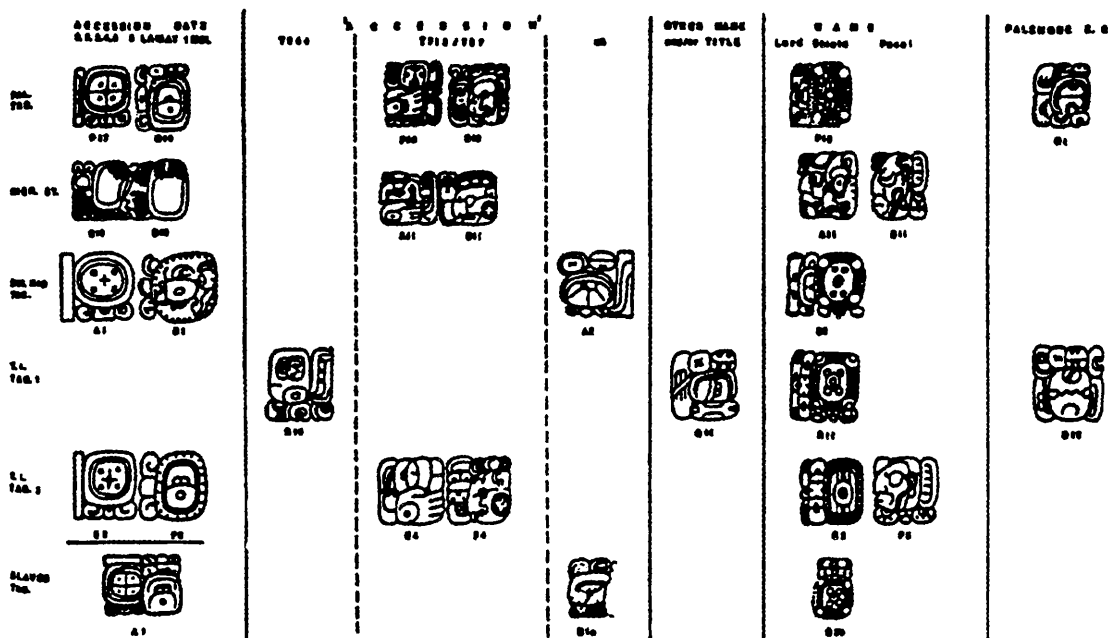


Figure 39.5. Accession clauses of Lord Shield Pacal

were the slab ever refound, the shield infix could be seen there. The bird head glyph group, the *pa-ca-l(a)* group, and '13 Pop' point strongly toward the identification of this slab as a fragmentary record of the birth of Lord Shield Pacal on 9.8.9.13.0 8 Ahau 13 Pop.

We should now like to enter into a discussion of 'inaugural' or 'accession' glyph groups. Berlin (1970b: 144–147) has summarized the known accession glyphs at other sites. He identifies T684 (Proskouriakoff's [1960] 'inaugural' glyph) as the predominantly used 'accession' glyph at Piedras Negras and Yaxchilan. It appears only in early texts at Tikal, rarely at Copan, and never at Palenque. In later texts, Tikal often uses T644, Copan predominantly and Palenque exclusively so. Berlin (1970b: 147) pointed out that "Finally, to complete our study of glyph 644 we ought to analyze the glyphs which in other Palenque texts go with the 9.13.10.6.8 and 9.14.10.4.2 dates of our inscription. But at present such an analysis would produce only a number of loose strands, which we would be unable to weave into a meaningful fabric." We think that by analyzing those texts and others, not only can many of the loose strands be woven into a 'meaningful fabric,' but additional glyph groups for 'accession' can be clearly identified.

T644 is associated with four of the six Palenque rulers presently under discussion. It appears only once with three of those four, while it appears twice with Lord Shield Pacal. In both Lord Shield Pacal occurrences, T644 is associated with the date 9.9.2.4.8 5 Lamat 1 Mol. This date occurs a total of six times at Palenque; the remaining four occurrences are connected with different glyphic compounds. One of these compounds is composed of two glyph groups. The first glyph group is variable, but it always contains T713. The second is transcribed T89 or 92.11 or 60 or 204:757. For convenience we shall call the entire

'ACCESSION' DATE 9.12.11.12.10 8 Oc 3 Kayab		'A C C E S S I O N' T 713/757		OTHER NAMES and/or TITLES (?)		NAME Lord Chan-Bahum		OTHER NAMES and/or TITLES (?)		PALENQUE S.A.	
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Figure 39.6. Accession clauses of Lord Chan-Bahum

compound the T713/757 compound. Four of the six accession dates we are postulating are associated with T713/757 compound. Since in no example are *both* T644 and the T713/757 compound present in the same passage, we suggest that they are at least in part interchangeable, and hence that the T713/757 compound also stand in some way for 'accession.'

We have established 9.9.2.4.8 5 Lamat 1 Mol as the 'accession' date of Lord Shield Pacal. The 5 Lamat 1 Mol date is connected by distance numbers and/or 'accession' clauses to other known 'accession' dates in Palenque. The del Rio Tablet links 5 Lamat 1 Mol to 9.12.11.12.10 8 Oc 3 Kayab, the 'accession' date of Lord Shield Pacal's successor. On the Palace Tablet 5 Lamat 1 Mol is linked to 9.13.10.6.8 5 Lamat 6 Xul, the date of 'accession' for Berlin's Subject B. The deliberate interconnection of the T713/757 dates is not accidental.

Other dates are associated with Lord Shield Pacal (Table 39.1). Since it is our purpose in this paper to identify only the birth, accession and death records of each ruler where possible, we shall proceed to the date of the death of Lord Shield Pacal, which occurs three times in the Palenque inscriptions (Figure 39.8). The first and most significant of the death texts is on Tablet 3 of the Temple of the inscriptions (Figure 39.9) where (T5–T12) 9.12.11.5.18 6 Etz'nab 11 Yax is followed by 'Lord Shield' and then by a Distance Number

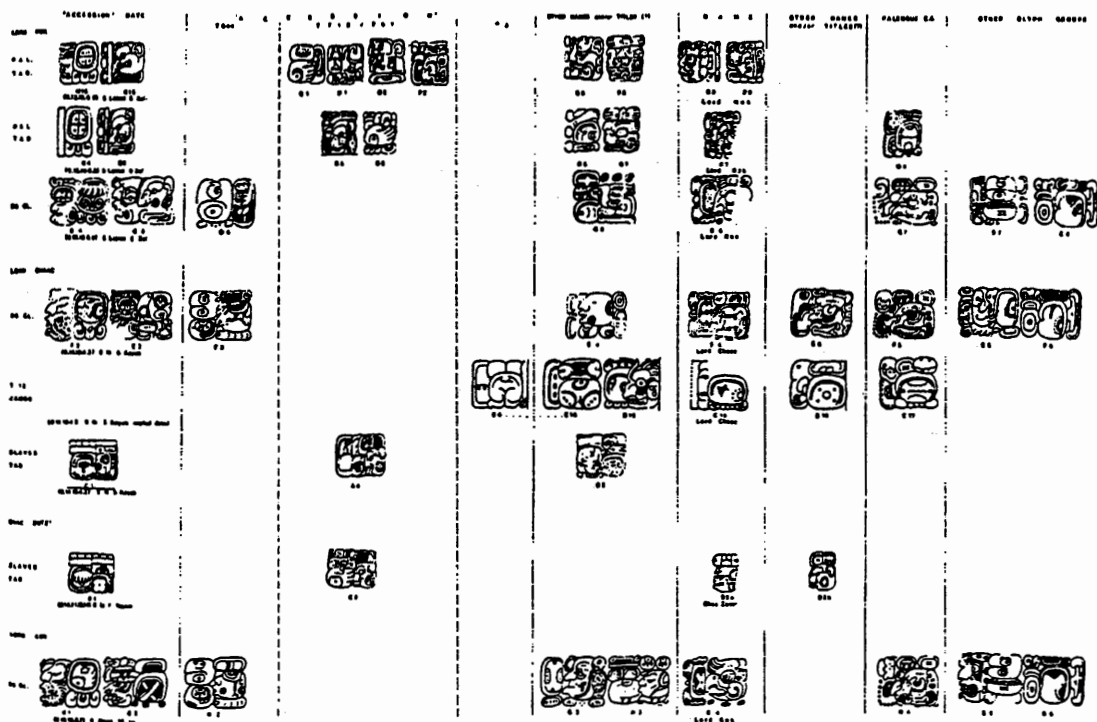


Figure 39.7. Accession clauses of Lord Hok, Lord Chaac, Chac Zut', and Lord Kuk

which, subtracted from 6 Etz'nab 11 Yax, leads back to 9.8.9.13.0 8 Ahau 13 Pop, the birth of Lord Shield Pacal. The Distance Number is followed by two glyph groups which are a T644 'seating' complex (cf. Berlin, 1970b: 141). The 'seating' complex is followed by 8 Oc 3 Kayab, just 132 days later. The 6 Etz'nab 11 Yax at 9.12.11.12.10 8 Oc 3 Kayab is the 'accession' date of Lord Chan-Bahlum, Lord Shield Pacal's successor. The Calendar round is followed by the T712/757 'accession,' compound, and then by 'Lord Chan-Bahlum' / Palenque. Two and a half glyph blocks of unknown significance occur at S11-S12a, followed at S12b-T12 by 'u-cimi ("his death") / Lord Shield / Palenque.' This is a fitting way to end the long inscription which immortalized Lord Shield.

We have no doubt that the final death clause refers to the last Lord Shield Pacal date in the inscription, namely 9.12.11.5.18 6 Etz'nab 11 Yax. Our conclusion is confirmed on the Sarcophagus Lid edge (1-5), where the text begins with the 'birth' of Lord Shield Pacal followed by the 6 Etz'nab 11 Yax date.

The third occurrence of 6 Etz'nab 11 Yax is on the Palace Tablet (Figure 39.8) at J9-J10, but there is no Lord Shield Pacal explicitly mentioned. However we think that at J13 there is the head variant (T1010.184.74) for the 'Lord Prefix' (T74.184), followed by a quincunx compound (T181.23.585H). The quincunx compound is commonly associated with Palenque rulers, though less frequently with Lord Shield Pacal than with others. We suspect that these two glyph groups must have contained for the ancient Maya some implicit reference to Lord Shield Pacal. At any rate, 'death' is explicitly mentioned in this

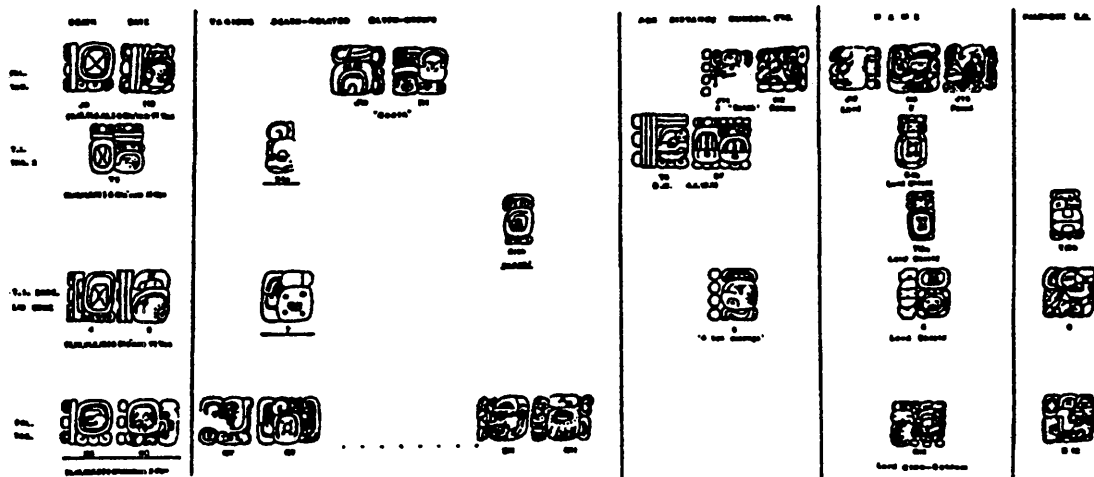


Figure 39.8. Death clauses of Lord Shield Pacal and Lord Chan-Bahlum

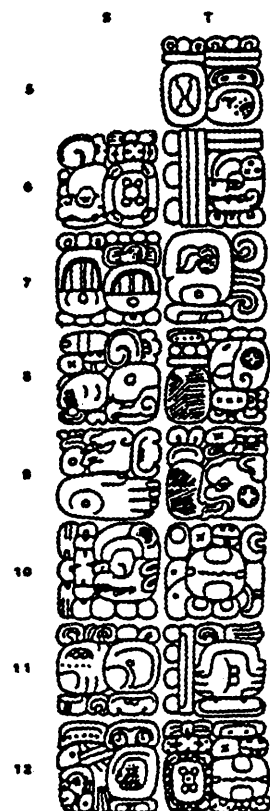


Figure 39.9. Temple of the Inscriptions, Tablet 3: passage relating to the death of Lord Shield Pacal and "accession" or Lord Chan-Bahlum

clause, at J10–I11 as T78?:575.125/1:179.503:82; this same phrase, with only minor variations, occurs three times at Yaxchilan immediately after the death date of Shield Jaguar (Proskouriakoff, 1963: 163). The presence of the death compound, along with the correspondence of the date to the references in the Temple of the Inscriptions, leaves us in no doubt that the death of Lord Shield Pacal is again recorded in this passage.

There is also a possible reference to Lord Shield Pacal's death in the final clause of the Tablet of the 96 Glyphs (L6–L7), where, after the dates of the text progressively climb to 9.17.13.0.0, there is a final reference to Lord Shield Pacal, who died some five katuns earlier. Here we find at L6 '5 katuns,' which we at first thought must be a reference to Lord Shield Pacal's age at death (he was in his fifth katun), but there is no the customary 'ben-ich' superfix present. We now believe that the '5 katuns' refers to the approximate time that had elapsed from the time of Lord Shield Pacal's death to the date of the carving of his inscription, 9.17.13.0.0.

'5 katuns' is followed at K7 by 'Lord Shield,' then at L7 by a glyph group with a strange prefix (T84?? or 86??) And a 'main sign' composed of a head with death markings and an 'i' glyph infixed above the eye (T1041). One almost wonders whether this reads literally '?-i-cimi.' It is interesting to note that *i* in Chol is the equivalent of Yucatec and Quiche *u*, "his, her, its." Lounsbury recently suggested to us that it is quite probable that the ancient Palenqueños spoke and ancestral form of Chol, and may have written in that language. He believes there were also "universal glyphic elements" that were cross-linguistic in nature. He suggests the 'u-bracket' was understood by all groups to represent the third person for the third person possessive could be written phonetically in the local language. Lounsbury's suggestions would certainly help to explain the abundance of 'birth' glyphs at Palenque with *i* prefixes, where one would normally, perhaps, expect a 'u-bracket.' Could these glyphs, then, read 'Lord Shield Pacal / x-his death'?

A second reference to Lord Shield Pacal's death may be contained earlier in the Tablet of the 96 Glyphs. At C1–D1, we find "Lord Shield Pacal / 5 'ben-ich' katuns." The passage seems to refer to 9.11.2.1.11 9 Chuen 9 Mac, but at that date Lord Shield Pacal was only in his third katun of life. Since his age at death was 4.1.10.18 and he had entered into the 5th katun of life, it is possible that this phrase at C1–D1 refers to his death and is not linked to 9 Chuen 9 Mac.

These passages seem to be paralleled in the Tablet of the Sun by the phrase, "5 'ben-ich' katuns (M4) / Lord Shield (L5) / T1:606 compound (M5) / Lady 'Ben-ich' Hel (L6) / Palenque emblem Glyph (M6)." Preceding this passage at L4 is a glyph group that is possibly an abbreviation of the death compound of the Palace Tablet. The Tablet of the foliated Cross has a similar passage (H–K), though there is no 'ben-ich' superfix over the '5 katuns,' and the 'abbreviated death compound' is not nearly so convincing. On the Eaves of House C of the Palace, Inscription 5, there is apparently a death compound, at A1, followed by 'Lord Shield / Pacal / Palenque,' but there is no associated date. The 4 Cauac 2 Pax of inscription 6 must be 9.9.6.10.19 in the Long Count because of its G3 and F associations.

Lord Shield Pacal was by all accounts a most remarkable man. Apparently in power, at least in name, by the age of 12½, he ruled for almost 70 years. His was a dominant influence at Palenque and he was surely the man responsible for its sudden blossoming

c. 9.10.0.0.0 into a major Classic site. His importance is clearly attested to by the apparent desire of later rulers, such as Lord Chan-Bahlum, Lord Hok, Chac Zut’ and Lord Kuk, to mention him with prominence in their own records.

LORD CHAN-BAHLUM

6 uinals and 12 kins after the death of Lord Shield Pacal the most prominent date in all the Palenque inscriptions, 9.12.11.12.10 8 Oc 3 Kayab, occurs seven times at Palenque. Five of these seven examples clearly show the accession glyph groups, the ‘T713/757 compound’ (Figure 39.6). There is no doubt whatsoever that this is the accession date of Lord Shield Pacal’s successor, whom Kubler (1972) called “Jaguar-Snake” and whom we shall refer to as Lord Chan-Bahlum (T74.184.762) (Figure 39.1).

The date of Lord Chan-Bahlum’s birth is recorded twice in the Palenque inscriptions. Twice with Lord Shield Pacal texts there is a Distance Number leading directly from his birth date to that of his accession; one of those (the Hieroglyphic Stairway, A1–B12) had ‘birth’ clearly recorded after the Initial Series date and before the Distance Number leading from it to the accession date. The other, however (T.I., Tablet 3, E1–F6), records the birth in the following way:

E1–F1	12.9.8	D.N. Add to E3–F3 . . .
E2–F2		‘birth/Lord Shield Pacal’
E3–F3	(9.8.9.13.0) 8 Ahau 13 Pop	. . . (birth date) to reach . . .
E4–F5		‘accession/Lord Shield/Pacal’
E6–F6	(9.9.2.4.8) 5 Lamat 1 Mol	(accession date)

Both event clauses precede the date on which they took place. We think that this system of recording is paralleled in the Tablet of the Foliated Cross, M17–O5, where we find:

M17–O1	2.9.6.4	D.N. Add to . . . ‘birth’
N2		
N5–O5	(9.10.2.6.6.2 Cimi 19 Zotz’)	. . . (Birth date) to reach
O2–O4		‘accession/title?/ Lord Chan-Bahlum/Palenque’
N5–O5	(9.12.11.12.10) 8 Oc 3 Kayab	(Accession date)

The differences between the two passages are: (1) the ‘birth’ date 9.10.2.6.6 2 Cimi 19 Zotz’ is not recorded. and (2) the person who was born is not specifically mentioned, but it is certain that Lord Chan-Bahlum is implied as the subject of both ‘event’ glyphs. On the

Tablet of the Sun at P12–Q12, the actual record of 2 Cimi 19 Zotz’ appears. The Long Count position is clearly 9.10.2.6.6 and the Calendar Round is followed by ‘birth’ at P13.

On the basis of the Tablet of the Foliated Cross reference and its parallelism with the birth/accession clause of Lord Shield Pacal and with birth/accession clauses of later rulers, we accept 9.10.2.6.6 2 Cimi 19 Zotz’ as the date of birth of Lord Chan-Bahlum.

The date of Lord Chan-Bahlum’s death is more obscure than of his birth. The date 9.12.19.14.12 5 Eb 5 Kayab is prominent, but it does not appear with death records. We believe his death is recorded on the Palace Tablet, which is a tablet of his successor. At K6–L6 his accession date, 9.12.11.12.10 8 Oc 3 Kayab, occurs joined by a distance number 6.12 to 9.12.11.5.18 6 Etz’nab 11 Yax. the date of Lord Shield Pacal’s death (J9–J14). 8 Oc 3 Kayab is followed by four glyph groups which we propose as an alternate glyph group for accession.

At K9–L9 we see the glyph group T1010.184.74/missing. ? :762:142; the former is our head variant for the T74.184 ‘Lord Prefix’; the latter reference to Chan-Bahlum.

His accession record is followed by:

M8–N8	(9.13.10.1.5)	6 Chicchan 3 Pop	
M9	1.5		D.N. Subtract
N9–N10	(9.13.)10.0.0	7 Ahau 3 Cumku	Anterior date indicator; half katun

These dates are followed by two glyph groups and at M12–N12 by T74:544:25. ? :762:142/38[43].168:793a:178?, reading ‘Lord Chan-Bahlum / Palenque.’ A Distance Number of 5.3 follows at M13. At N13–M14 are two glyph groups, which appeared earlier in the text, immediately after the Distance Number leading from the death of Lord Shield Pacal to the accession of Lord Chan-Bahlum. The parallelism again seems to be deliberate. The second Distance Number, only 29 days less than the earlier one, almost certainly connects the date of Lord Chan-Bahlum’s death to the accession date of his successor. While there is no recognized ‘death’ glyph group in the 6 Chicchan 3 Pop clause, the section is riddled with ‘death heads’; we would suggest that M11 (notice the *i-cimi* element) or M7 is the place to look for a ‘death’ reference. Of our two glyph groups in the Distance Number clause, we suggest that the former goes with the death date and is an explicit reference to ‘death,’ while the latter goes with the accession date.

LORD HOK

The next ruler at Palenque is Berlin’s “Subject B,” whose accession date he identifies (1970b: 140–147) on the Tablet of the 96 Glyphs as 9.13.10.6.8 5 Lamat 6 Xul (D4–C7). Berlin associated “Subject B” with the ‘Trias’ group of the Palace Tablet, a group he first identified in 1965. According to Berlin, ‘Trias’ 3 was ‘born’ on the day 9.10.17.6.0 1 Ahau 3 Uayeb. However ‘birth’ is recorded elsewhere on the Palace Tablet at C4 and associated with the Initial Series 9.10.11.17.0 11 Ahau 8 Mac and the 819-day count date 9.10.10.11.2 1 Ik 15 Yaxkin; ‘birth’ is repeated at D19 where it is again linked to 11 Ahau 8 Mac.

Berlin seems to think (1965a and 1970b: 141) that the members of the 'Trias' group are separate individuals; however, we think that due to the constant association of glyph groups identified as the 'Trias' group with Lord Hok (Berlin's 'Subject B' ruler), the 'Trias' glyph groups represent alternative or additional names and/or titles or offices of Lord Hok.

The accession date of Lord Hok is recorded twice on the Palace Tablet. The second of these records (R4–Q8) employs the 'T713/757' accession compound, followed by 'Trias' 1 and 'Lord Hok / Palenque.' 'Trias' 1 is also associated with Lord Hok, whose name appears with the head variant of the 'Lord Prefix' on the Dumbarton Oaks Tablet at E–H. The first occurrence of Hok's accession date in the Palace Tablet shows the date to be extremely important; it is followed by a secondary series, almost elevating the date to the status of an Initial Series. The passage is completed by an extremely long explanatory passage, possibly beginning with the missing M19, and continuing through P14. Lord Hok is mentioned at O9–P9, with the head variant of the 'Lord prefix,' and is directly preceded by 'Trias' 2. The latest occurrence of Lord Hok so far known is following the date 9.14.8.14.15 9 Men 3 Yax, where he is preceded by 'Trias' 3.

The accession readings are strengthened by the presence of the glyph group at C6b on the Tablet of the 96 Glyphs. C6b follows the date 9.13.10.6.8 5 Lamat 6 Xul (D4–C5) and T644 accession compounds (DS–C6a?), and it precedes 'Lord Hok / Palenque' (D6–C7). The transcription of the glyph group at C6b is TIII:793a:23; Berlin (1970n: 141) thinks that this glyph must refer to 'Trias' 1 or 'Trias' 2. We think it more probable that C6b refers to the 'Trias' Group as a whole and that T793a signifies three particular offices held by Lord Hok in his rulership of Palenque.

A problem arises with association of the 'Trias' group members with Lord Hok from the ambiguous birth dates recorded on the Palace Tablet. We think that 9.10.11.17.0 is the *actual* birth date of Lord Hok; it is obviously a highly important date in Lord Hok's inscription; Trias 1 is mentioned, although 'Lord Hok' does not seem to be in the accompanying passage. We suspect that (9.10.17.6.0) 1 Ahau 3 Uayeb, 5.7.0 after Lord Hok's birth, is the date on which the title or office 'Trias 3' was initiated and on (9.13.14.8.0) 8 Ahau 18 Xul, just 4.1.12 after Lord Hok's accession, Lord Hok took on that title or office.

LORD CHAAC AND/OR CHAC ZUTZ'

Berlin's 'Subject C' whom we shall call Lord Chaac is almost certainly the next ruler of Palenque. The date of his accession, 9.14.10.4.2 9 Ik 5 Kayab, is recorded three times at Palenque:

1. On the Tablet of the 96 Glyphs at F2–E3, followed by the accession compounds T644:181[178].53:747:188 at F3, and T74.184.229:528:140 ('Lord Chaac') at F4.
2. On the jambs of Temple 18, where the date is not stated but implied by a Distance number (D4–D5) 2.3.16.14 leading to it from the Initial Series date 9.12.6.5.8 3 Lamat 6 Zac, and by the next Distance Number (D7–C9) 7.14.9.12.0 leading from it back to the early date 2.0.0.10.2 9 Ik 0 Zac, recorded at C10–D10. We thus have the scheme:

A1–B5, A13	9.12. 6. 5. 8	3 Lamat 6 Zac	Initial Series
D4–D5	2. 3.16.14	D.N. Add to I.S.	
	(9.14.10. 4. 2	9 Ik 5 Kayab)	Not recorded
D7–C9	7.14. 9.12. 0		D.N. Subtract
C10–D10	2. 0. 0.10.(2)	9 Ik 0 Zac	

The passage D4–D6 on the Temple 18 Jambis exactly parallels the Lord Shield Pacal clause (Temple of the Inscriptions, Tablet 3, E1–F6) and the Lord Chan-Bahlum clause (Tablet of the Foliated Cross, M17–O5) mentioned earlier (Figure 39.10). In all three cases a Distance Number leads from a ‘birth’ date to a later date. In the case of the first two clauses, at least, this later date is the accession date of the lord in question. In all three cases a ‘birth’ glyph group immediately follows the Distance Number. In the Lord Shield Pacal passage we have ‘Shield Pacal’ and then his birth date. In both the Lord Shield Pacal and Lord Chan-Bahlum passages the ‘birth’ record is followed by the accession compound ‘T713/757.’

The glyph group T679.168:700var. 116 in the Temple 18 passage is yet another way to record accession. The same basic glyph group occurs in the Palace Tablet immediately after the date of Lord Chan-Bahlum’s accession. A probable third occurrence is on the del Rio Tablet, where a ‘Main Sign’ similar in form to the T700var. appears with identical affixes (T168 superfix and T116 postfix) and immediately follows the accession date of Lord Shield Pacal. In all of these passages no other recognized ‘accession’ glyph group is present, though all are confirmed accession dates. Thus the T679.168: 700var. 116 glyph group must be an alternative way to record accession.

3. The third occurrence of the date 9.14.10.4.2 9 Ik 5 Kayab is on the Tablet of the Slaves at C1—‘(9.14.10.4.2) 9 Ik 5-te-Kayab.’ Another date (9.14.11.12.14) 8 Ix 7 Yaxkin immediately follows at D 1. These dates cannot be definitely fixed in the Long Count, but we believe that after the second date of the Tablet (9.11.18.9.17) 7 Caban 15 Kayab (B4), the dates jump into the 14th katun. The text ends with the 3-katun anniversary of 7 Caban 15 Kayab, at (9.14.18.9.17) 1 Caban 15 Uo at G5b–H5a. The first event glyph group after the dates 9 Ik 5 Kayab and 8 Ix 7 Yaxkin is the ‘T713/757’ accession compound (C2).

The principal subject of the Tablet of the Slaves is named without the T74.184 ‘Lord Prefix.’ He, like Lord Hok, has three names and/or titles—T333:544 or 106:130 or 126/1:526: 246/109:756. The T109:756 occurs at D2a and G2a; one of the full tri-name compounds (with T544.116) occurs at D3–E1a, and the last (with T106) at F3–F4a. At A3 we find, apparently, ‘birth-x-bat,’ almost certainly a reference to Chac Zut’z’.

Apart from the apparent sharing of the date 9.14.10.4.2 9 Ik 5 Kayab, this text and those of Temple 18 have a great deal in common. The personage offering the shield in the Tablet of the Slaves is undoubtedly a woman, as shown by her *huipil*; her ‘name

glyph’ is at L1-T1000.518:592:117. This glyph group also occurs twice in Temple 18: on the Jambs at C13, and as one of the detached stucco glyphs (Ruz # 3—see Ruz, 1958b: 160). Lord Chaac and Chac Zutz’ also share a correspondence in name or title glyph groups. As seen on the Temple 18 Jambs, the name and/or title glyphs of Lord Chaac are T758:110 or 11.110:5297/1:526:246/1068 (here we differ from Berlin [1970b: 140] who claims that ‘T1068’ and Lord Chaac are two different people)/74.184.229:528:178. It is apparent that the T1:526:246 (long ago recognized by Kelley [1962b: 324 and 329] as an ‘appellative’ glyph group) and also, perhaps, the T110 compounds are shared. ‘Chac Zutz’ ‘ also occurs in Temple 18, which seems to have been Lord Chaac’s domain, in a detached stucco glyph (Fernández # 51a—see Fernández and Berlin [1954: 43]).

Because of the above correspondences between Lord Chaac and Chac Zutz’, we felt the two must be one and the same individual; our assumption was strengthened by the fact that Lord Chaac occurs as far as we know with no date later than 9.14.10.4.2 9 Ik 5 Kayab. It appeared to us that the name ‘Chac Zutz’ ‘ was an alternative name used in the Tablet of the Slaves and perhaps after the 8 Ix 7 Yaxkin date. However, there is one serious stumbling block to the interpretation of Lord Chaac and Chac Zutz’ as one personage. The Initial Series of the Temple 18 Jambs and the associated 819 day count date are followed by ‘birth’ and then by T758:110/1068, which may be two alternative names or titles of Lord Chaac. Thus, it seems we have 9.11.18.9.17 7 Caban 15 Kayab as the birth date of Chac Zutz’ from the Tablet of the Slaves. The 3-katun anniversary of 7 Caban 15 Kayab is celebrated at the conclusion of the Chac-Zutz’ inscription. At the same time, we have a clear ‘birth’ at 9.12.6.5.8 3 Lamat 6 Zac for Lord Chaac in the Temple 18 Jambs.

We think that it is most likely that Chac Zutz’ was Lord Chaac’s successor, and that the early dates of the Tablet of the Slaves parallel the layout of the Palace Tablet and the Tablet of the 96 Glyphs, where important dates (especially accession dates) of predecessors are listed. The scheme in the Tablet of the Slaves seems to be (Figure 39.11):

A1	(9.9.2.4.8)	5 Lamat 1 Mol	Accession date
B1b			of ‘Lord Shield’
A2b–B2			Accession of ‘Chan-Bahlum’??
A3			Accession of ‘Hok’??
A4			‘Birth’ of “?-Zutz,” on
B4	(9.11.18.9.17)	7 Caban 15 Kayab	
C1	(9.14.10.4.2)	9 Ik 5 Kayab	(Accession date of Lord Chaac)
D1	(9.14.11.12.14)	8 Ix 7 Yaxkin	
C2–D2a			Accession of ‘Chac Zutz’



Figure 39.11. Tablet of the Slaves

This is the only way of tying in the 8 Ix 7 Yaxkin date to any meaningful clause—possibly the 9 Ik 5 Kayab accession date of Lord Chaac (just over one year earlier) was considered to be fresh enough in readers' minds that no further explanation of it was considered necessary.

This interpretation would mean that Lord Chaac ruled for less than 1.8.12 in the Maya notation or only about 1½ years. This short reign would help to explain the absence of dates associated with him after his accession. Later Chaac dates, possibly even that of his death, may be contained in the fragmentary stucco texts of Temple 18.

LORD KUK

The next known Palenque ruler has in his name glyph a quetzal head as the 'Main Sign': the word for Quetzal in Chol is *Kuk*. Thompson (1962: 326–328) includes both quetzals and macaws (possibly parrots also) under his glyph T744. The quetzal head mainly belongs within his T744a category; our *kuk* head is in fact Thompson's T744a type glyph. It was Lord Kuk who had the Tablet of the 96 Glyphs inscribed. It is to two men in particular that this paper owes its existence: to Lord Kuk for having his tablet inscribed with the accession dates of so many of his predecessors and to Heinrich Berlin, who first realized (1970b) its tremendous importance in the sequence of rulers at Palenque.

In view of the importance of Lord Kuk's records to us of the 20th Century, it is interesting that we only have three dates for him, all on the Tablet of the 96 Glyphs:

H1–G2 (9.16.13.0.7) 9 Manik 15 Uo—followed at H2 by an accession compound (T644:6831178].24?:1000c:188), then by two titles(?) and at G4 'Lord Kuk' T74.184.744a:142, and the Palenque Emblem Glyph (H4).

H7–G8 (9.17.13.0.7) 7 Manik 0 Pax—followed by 'completion of 'u' 1 Katun' (probably 'completion of his first katun,' i.e. as a ruler) at H8–I1 and later (J3) by 'Lord Kuk'—the 1-katun anniversary of his accession.

K2–L2 (9.17.13.0.0) 13 Ahau 13 Muan—probably the 'dedication date' of the Tablet of the 96 Glyphs.

No date of birth, then, or of death is so far known for Lord Kuk—all we know of him is that he gained power of Palenque on 9.16.13.0.7 and that he ruled for at least 20 years.

SUMMARY

There seems to be no doubt that the birth, accession, and death dates for Lord Shield Pacal and Lord Chan-Bahlum are correct. Lord Hok's accession date is certain; his birth date, although ambiguous, was probably 9.10.11.17.0, the Initial Series date of the Palace Tablet. His death in all probability occurred after 9.14.8.14.15 and is not recorded in the Palenque inscriptions known at the present time. All we know of Lord Kuk is his accession date, and that he was still in power 1 katun later. We have no record of his birth nor of his death.

Our biggest problem is to resolve whether Lord Chaac and Chac Zut' are the same or different individuals. We will present a synthesis of the evidence for both interpretations but at present we cannot resolve the question.

Evidence in favor of interpretation as a single individual is as follows:

1. The two occur in the same text, the Stucco Tablet of Temple 18; each occurs on one of the paired *alfardas* from the Tower Courtyard of the Palace (Lord Chaac is named on the 'Orator' Tablet and Chac Zut' on the 'Scribe' Tablet).
2. The two 'personages' share certain titles, such as the '*u-cab*.'
3. It is possible that the 9 Ik 5 Kayab date is an accession date 'shared' by both Lord Chaac and Chac-Zut'.
4. Both appear to be associated with the same female.
5. Chac Zut' has no 'Lord Prefix,' yet all the other rulers of Palenque discussed in this paper do; it could thus be argued that 'Chac Zut'' is a secondary name of Lord

Chaac. The Tablet of the Slaves was found in a secondary group well away from the area which contains the accession and death monuments of the other rulers and the tablet may well be a secondary text dedicated to the 3-katun anniversary of birth. If the tablet is celebrating other than a major event and positioned in a major monumental group, the use of names with the ‘Lord Prefix’ may not have been a mandatory convention.

- 6. The text records the capture of one or more persons, and may be concerned primarily with the warrior aspects of the ruler. As ‘captor’ the name of rulers may not have required the ‘Lord Prefix.’
- 7. On the Tablet of the Slaves we find a pattern very similar to that discussed earlier in which an ‘age Distance Number’ is followed by ‘birth,’ name, and birth dates, then by ‘accession,’ name and accession date (Figure 39.11). On the Tablet of the Slaves, B3–C1, we find:

B3	11 tuns (??), 2 katuns	Distance Number?
A4		‘birth-x-bat’
B4	(9.11.18.9.17) 7 Caban 15 Kayab	(birth date)
A5		‘accession’ (almost certainly)
B5		??
C1	(9.14.10.4.2) 9 Ik 5 Kayab	(accession date)

The interval between 9.11.18.9.17 and 9.14.10.4.2 is 2.11.12.5, but as the Tablet of the Slaves is an extremely abbreviated text, it is possible that the Distance Number is recorded in an abbreviated form:

B4	(9.11.18.9.17) 7 Caban 15 Kayab
B3	2.11.(12.5) Approximate Distance Number. Add.
C1	(9.14.10.4.2) 9 Ik 5 Kayab

If the above reading is correct we do find a correspondence with the three other texts mentioned and the accession date 9.14.10.4.2 9 Ik 5 Kayab does refer to Chac Zut’z’. If the 2.11.(0.0) Distance Number is an ‘age at accession’ record, it must be linked to the ‘communal’ 9 Ik 5 Kayab date.

- 8. It is possible that the 8 Ik 7 Yaxkin date represents the adoption of a secondary name by Lord Chaac (namely, ‘Chac Zut’z’”), thus paralleling our tentative suggestion for Lord Hok’s adoption of the ‘T3’ title some 5½ years after his actual accession to power.

Evidence in favour of interpretation as two different individuals is as follows:

- 1. Since most texts in Palenque mention at least two rulers, the occurrence of Lord Chaac and Chac Zut’z’ together may have no significance.

- 2. The shared ‘titles’ may well be universal ones; the ‘*u-cab*’ seems to be one of these (Kelley 1962b: 324 and Figure 41).
- 3. The 8 Ix 7 Yaxkin date on the Tablet of the Slaves has a very clear ‘accession/Chac Zutz’ following it. If Lord Chaac and Chac Zutz’ are the same person, the later ‘accession’ record would have to be explained.
- 4. The association of Lord Chaac and Chac Zutz’ with the same woman is no proof that the two men are the same. Likewise the absence of a ‘Lord Prefix’ to Chac Zutz’ does not necessarily mean that he was not a ‘lord’ in his own right.
- 5. Lord Chaac definitely has an ‘age Distance Number/birth/accession’ passage referring to him on the Temple 18 Jamsb. The accession date is clearly 9.14.10.4.2 9 Ik 5 Kayab, but the birth date is 9.12.6.5.8 3 Lamat 6 Zac, not 7 Caban 15 Kayab.

Until other texts are found including information on the period from 9.14.10.4.2 to 9.15.0.0.0 or until the known texts are further understood, the question of Lord Chaac and Chac Zutz’ as one or two different personages must remain unanswered. It should also be noted that there are still several gaps in the history of Palenque as we have presented it. There is a short gap between 9.14.8.14.15 and 9.14.10.4.2, in which we feel that Lord Hok’s death occurred. A much larger gap occurs between c. 9.15.0.0.0 and 9.16.13.0.7, the date of Lord Kuk’s accession; the record is likewise blank after 9.17.13.0.7. It is to be hoped that inscriptions will be found to fill these gaps.

In this paper we have given interpretations of several glyph groups. Our ‘T713/757’ compound and ‘T700var.’ glyph group are continually linked to dates associated with Berlin’s ‘T644’ glyph group for accession. All three compounds can be interpreted as ‘accession’ in the general sense of the word. We agree with Berlin’s identification of T74.184 as a ‘Lord Prefix’ and suggest the T1010a and b.184.74 is the ‘head variant’ of that prefix. The head variant occurs frequently and in every case seems to be directly interchangeable for the prefix.

TABLE 39.1: THE BIRTHS, DEATHS, ACCESSIONS, AND REIGNS OF THE LORDS OF PALENQUE

Lord Shield Pacal			Ages
Birth	9. 8. 9.13. 0	8 Ahau 13 Pop	
Accession	9. 9. 2. 4. 8	5 Lamat 1 Mol	12 yrs., 125 days
Death	9.12.11. 5.18	6 Etz’nab 11 Yax	80 yrs., 158 days
Reign	3. 9. 1.10		or 68 yrs., 33 days
Lord Chan-Bahlum			
Birth	9.10. 2. 6. 6	2 Cimi 19 Zotz’	
Accession	9.12.11.12.10	8 Oc 3 Kayab	48 yrs., 232 days

Death	9.13.10. 1. 5	6 Chicchan 3 Pop	60 yrs., 311 days
Reign	18. 6.15		or 18 yrs., 40 days

Lord Hok

Birth	9.10.11.17. 0	11 Ahau 8 Mac	
Accession	9.13.10. 6. 8	5 Lamat 6 Xul	57 yrs., 209 days
Death	Post-9.14. 8.14.15	9 Men 3 Yax	75 yrs., 281 days+
Reign	18.8.7		or 18 yrs., 72 days

Lord Chaac

Birth	9.12. 6. 5. 8	3 Lamat 6 Zac	
Accession	9.14.10. 4. 2	9 Ik 5 Kayab	43 yrs., 108 days
Death	Post-9.14.10. 4. 2	9 Ik 5 kayab	?
Reign	Unknown		

Chac-Zutz'

Birth	9.11.18. 9.17	7 Caban 15 Kayab	
Accession	9.14.11.12.14	8 Ix 7 Yaxkin	52 yrs., 142 days
Death	Post- 9.15. 0. 0. 0	4 Ahau 13 Yax	60 yrs., 208 days+
Reign	8.5.6+		or 8 yrs., 64 days

Lord Kuk

Birth	Unknown		
Accession	9.16.13. 0. 7	9 Manik 15 Uo	?
Death	Post-9.16.13. 0. 7	7 Manik O Pax	?
Reign	1.9.9.9+	1.0.0.0+	or 19 yrs., 260 days+

TABLE 39.2: A CONCORDANCE OF THE NAMES OF THE PALENQUE LORDS USED IN THIS AND OTHER PAPERS

Berlin (1970b)	Kubler (1969)	Kubler (1972)	Mathews and Schele (1974)
Subject A	Sunshield	Jaguar-Snake	Lord Shield Pacal Lord Chan-Bahlum
Subject B			Lord Hok

Subject C	Lord Chaac Chac Zutz'
Subject D	Lord Kuk

TABLES 39.3–39.8: DATES AND EVENTS OF THE RULERS OF PALENQUE

TABLE 39.3: LORD SHIELD PACAL

9.8.9.13.0	8 Ahau	13 Pop	Hier. St. A1–B10	“birth”
			T.I. 3 E2–F3	“birth”
			*T.I. 3 T6–S7	
			T.I. Sarc. Lid 1–3	“birth”
			Pas. Tracing A1–A2	“birth”
9.9.2.4.8	5 Lamat	1 Mol	Pal. Tab. Q15–R1	“accession”
			Hier. St. A11–C11	“accession”
			del Rio Tab. A1–B2	“accession”
			T.I. 1 R10–Q12	“accession”
			T.I. 3 E4–F6	“accession”
			Slaves’ Tab. A1–B1	“accession”
9.10.0.0.0	1 Ahau	8 Kayab	T.I. 1 S8–T12	P.E.
9.10.8.9.3	9 Akbal	6 Xul	T.C. G1–K6	?
9.11.0.0.0	12 Ahau	8 Ceh	Pal. Tab. E17–H7	P.E.
			Subt. Altar I–N	P.E.
			96 Gl. A1–B4	P.E.
			T.I. 2 B1–A3 and C2–D4	P.E.
9.11.2.1.11	9 Chuen	9 Mac	96 Gl. A5–D1	?
9.11.6.16.11	7 Chuen	4 Ch’en	Hier. St. F7–E12	?
9.11.6.16.17	13 Caban	10 Ch’en	T.I. 3 K11–M3	?
9.12.0.0.0	10 Ahau	8 Yaxkin	T.I. 3 K11–M3	?
9.12.3.6.6	7 Cimi	19 Ceh	T.I. 3 R1–R2	?
9.12.10.0.0	9 Ahau	18 Zotz’	T.I. 3 T1–T2	P.E.

9.12.11.5.18	6 Etz'nab	11 Yax	Pal. Tab. J9–I14	“death”
			T.I. 3 T5–S6 and S11b–T12	“death”
			T.I. Sarc. Lid 4–9	“death”

*Implied date

TABLE 39.4: LORD CHAN-BAHLUM

9.10.2.6.6	2 Cimi	19 Zotz	T.S. P12–P13	“birth”
			*T.F.C. N2 and O3–O4	“birth”
9.10.8.9.3	9 Akbal	6 Xul	T.S. P6–Q9	?
9.10.10.0.0	13 Ahau	18 Kankin	T.S. G2–K3	P.E.
			Chichen Itza Cenote Jade A1–B1	
9.12.11.12.10	8 Oc	3 Kayab	Pal. Tab. K6–K11	“accession”
			“Stone from House E”	“accession”
			T.I. 3 T8–T10	“accession”
			T.S. L1–M3	“accession”
			T.C. L1–O1	“accession”
			T.F.C. O2–O5	“accession”
9.12.16.2.2	1 Ik	10 Zec	T.S. A14–D1+	?
9.12.18.5.16	2 Cib	14 Mol	*T.C. O4–O15	?
			*T.F.C. N7–N13	?
9.12.18.5.17	3 Caban	15 Mol	T.S. O7–O12	?
			T.F.C. M5–M9+	?
9.12.18.7.1	1 Imix	19 Ch'en	T.F.C. Jamb A5–A7a	819 day count before 9.12.19.14.12
9.12.19.14.12	5 Eb	5 Kayab	T.C. Bals. E2–L2	?
			T.F.C. Bals. E2–L2	?
			T.F.C. Jamb A1–b4 and A7b–A10	?

			Death's Head B2-G2	?
9.13.0.0.0	8 Ahau	8 Uo	T.E.C. O14-O17	?
9.13.10.1.5	6 Chicchan	3 Pop	Pal. Tab. M7-N8 and M11-N12	"death"

* Implied date

TABLE 39.5: LORD HOK

9.10.10.11.2	1 Ik	15 Yaxkin	Pal.Tab. C1-D3	819 day count before birth
9.10.11.17.0	11 Ahau	15 Yaxkin	Pal. Tab. A1-A18, B4, and B8-B9(?)	"birth"
9.13.10.6.8	5 Lamat	6 Xul	Pal. Tab. M15-O2 and O8-P12	"accession"
			Pal.Tab. R4-Q8	"accession"
			96 Gl. D4-C8	"accession"
9.14.8.14.15	9 Men	3 Yax	Pal. Tab. Q9-Q18	?

TABLE 39.6: LORD CHAAC

9.12.4.13.7	1 Manik	10 Pop	T. 18 Jambs A10-B12	819 day count before birth
9.12.6.5.8	3 Lamat	6 Zac	T. 18 Jambs A1-B8, A13-A15	"birth"
9.13.0.7.0	5 Ahau	8 Ch'en	T.18 Jambs A17-B18	?
9.13.2.9.0	11 Ahau	18 Yax	T.18 Jambs A19-C3	?
9.14.10.4.2	9 Ik	5 Kayab	96 Gl. F2-F6	"accession"
			*T. 18 Jambs D5 and C15-C17	"accession"
			Slaves Tab. A5-C1	"accession"

TABLE 39.7: CHAC ZUTZ'

9.11.18.9.7	7 Caban	15 Kayab	Slaves Tab. A4-B4	"birth"
9.14.11.12.14	8 Ix	7 Yaxkin	Slaves Tab. D1-D2	"accession"

9.14.11.17.6	9 Cimi	19 Zac	Slaves Tab. F1–F2	capture of Lord Manik-hand (Jonuta?) and two (?) other lords
9.14.13.11.2	7 Ik	5 Zec	Slaves Tab. C3–E1	?
9.14.17.12.19	2 Cauac	2 Xul	Slaves Tab. E3–F4a	?
9.14.18.1.1	7 Imix	4 Ceh	Slaves Tab. F4b–G2	?
9.14.18.9.8	5 Lamat	6 Uo	Slaves Tab. H3b–H4a	?
9.14.18.9.17	1 Caban	15 Uo	Slaves Tab. G5–H5	3 katun anniversary of birth

TABLE 39.8: LORD KUK

9.16.13.0.7	9 Manik	15 Uo	96 Gl. F1–F5	“accession”
			**Pal., House E. West Gal. mural	“accession”
9.17.13.0.7	7 Manik	0 Pax	96 Gl. H7–J3	1 katun anniversary of accession

*Implied date

**Implied date by the T713/757 accession compound preceding Lord Kuk’s name

NOTE

1. Chol names have been given to Palenque lords in the paper—an agreement reached at the last meeting of the Primera Mesa Redonda de Palenque.

“Notes on the Inscriptions on the Back of Dos Pilas Stela 8”

Peter Mathews

Maya hieroglyphic decipherment has been rapid during the last few years, with intense communication between scholars and speedy development of new ideas. This is the positive aspect of such progress. The negative is that many important contributions await full publication. Often, they are circulated informally, through samizdat networks or the distribution of Xeroxed papers to epigraphers on mailing lists. The paper presented here is one such effort—never before published despite its brilliance and wide citation by epigraphers. In this paper, Mathews reports on the back of Dos Pilas Stela 8, which displays a long, stunningly beautiful text, if somewhat mutilated by looters (fragments of the top of the inscription now languish in private collections). The execution of glyphs and idiosyncratic details, including its almost excessive ornamentation with dots and other minute, baroque elaborations, make this a masterpiece of Maya glyphic art.

*This article is significant for many reasons. It represents a datum in our understanding of the Dos Pilas dynasty (Houston 1993) and contains many other key advances, such as the identification of the verb *mucah*, “is buried.” Mathews arrived at this reading by applying Knorosov’s syllabic values and supported it by observing the verb’s consistent occurrence a few days after death events. A few years later, additional proof for this reading came to light with the appearance of this verb in the mural paintings of Tomb 12, Río Azul (D. Stuart 1987a); other work by Stuart and Houston (1994: 43–44) has demonstrated further that toponymic signs also figure in such burial expressions. With this article Mathews contributed to the study of Maya religion by identifying a pair of deities known as “the paddler gods”—so-called because some depictions show them paddling canoes—and itemized their joint appearance in the texts and iconography of the Classic period. Finally, this paper presents a persuasive argument that “Puuc-style” dating resulted not so much from shifts in year bearers, but, on occasion, from an attempt to record night-time events, when the 260-day position had advanced beyond the 365-day, probably because these calendrical cycles began at different times, one at noon or dusk, perhaps, and the other at midnight. The image that comes to mind is vivid indeed: a royal burial at night, with torch play and conch music, accompanied by flitting motion from dancers and other ritual participants. Other*

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evidence lends strong support to Mathews's argument: note, for example, the presence of a compound spelling yi-K'IN-ni, possibly to be transliterated as y-ik'-k'in, "the black of the day." The combination of this phrase with both a Puuc-style date and a burial event also occurs on a panel from Tzendales, recorded eighty years ago by Herbert Spinden (Spinden 1913: fig. 232). The text reads thus: y-ik'-k'in/7 Imix [lord of the night] 13 Zip/och k'ak'/y-et-nah/u k'aba/u muknal (etc.), "night, 7 Imix *14 Zip, fire enters the 'companion house,' the name of his burial place." Such independent confirmation testifies to Mathews' intuition and receptiveness to unexplored possibilities.



Figure 40.1. Dos Pilas Stela 8, front (Photo by Ian Graham)

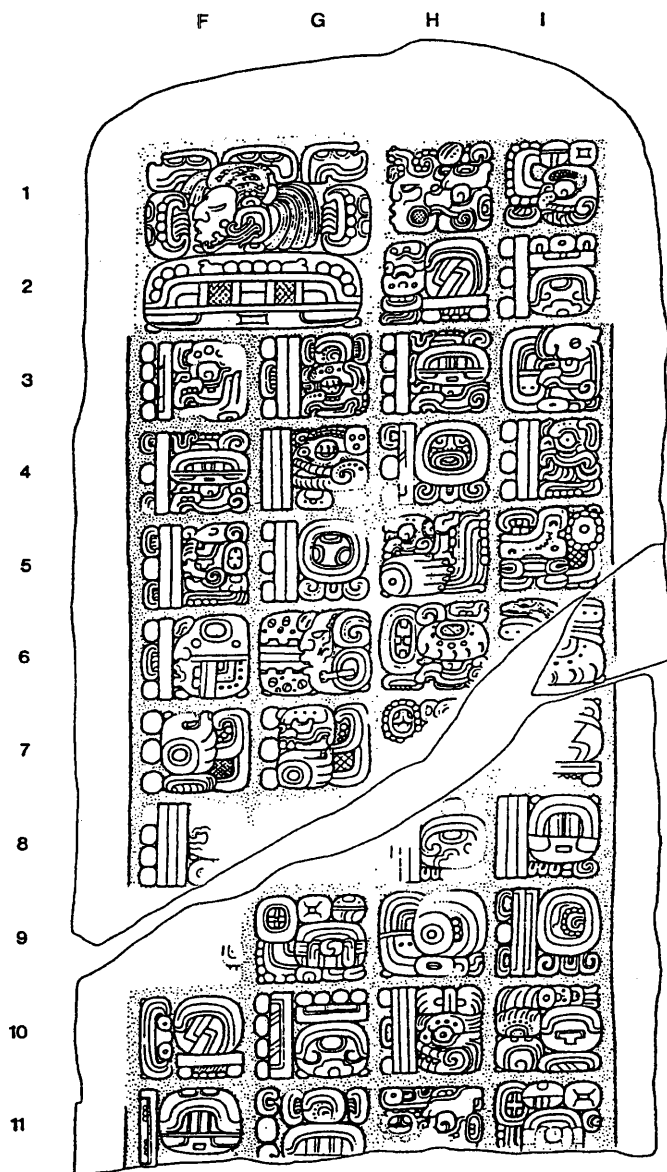


Figure 40.2. Dos Pilas Stela 8, back (Drawing by Ian Graham)

Surely one of the finest examples of Maya calligraphy is the inscription carved on the back of Stela 8 at Dos Pilas, Guatemala. Dos Pilas was discovered in 1954 (Vinson 1960); it lies approximately 10 km southwest of Seibal, in the drainage of the Río de la Pasión, Department of El Peten. The site was looted some time after its discovery, and Stela 8 was among the casualties. The upper two rows of the inscription on the back were sawn off in two panels (I. Graham 1971: 62–63). The Initial Series introductory glyph is now

in a private collection in the United States. It has been published in an exhibition catalogue of the Museum of Primitive Art (1969#108).

Unfortunately, the front of the monument has been badly weathered (Figure 40.1). It shows a male personage standing in full frontal position, and above him is an inscription (now weathered) of 22 glyph blocks. The sides are plain. Ian Graham has published a photograph of the inscription on the back of the upper two fragments (Graham 1971: 62), and he has made an excellent drawing of the entire inscription, which I present here with his kind permission (Figure 40.2).

This inscription comprises 4 columns of 25(+) glyph blocks each: we shall see later that 26 is the most likely number of rows. The total number of glyph blocks on the back of stela 8, then—counting the Initial Series introductory glyph as 1—is 101, on what are now five fragments of the monument. Sixteen of these 101 glyph blocks have now totally gone; in addition, 25 glyph blocks are chipped, to varying degrees—although most are reconstructible.

I

The inscription on the back of stela 8 can be broken down into eight clauses, of which only clauses 3 and 8 are seriously affected by the breaks in the stone. I present below each of these clauses; first in paraphrase form, and then with more detailed commentary. It should be emphasized that the paraphrases are not a “translation” of the text in any exact sense, although they do, I think, give the approximate meaning of the clause. Asterisks in the paraphrases represent reconstructions of the text, and specific glyph identifications are given in the Thompson (1962) system of cataloguing the Maya hieroglyphs.

CLAUSE 1 (F1–G9)

“the month Kayab, the date 9.12.*0.*10.11 13 Chuen 19 Kayab, the fourth lord of the night, the third day of the third lunar month: on which occurred the *birth of ‘Shield-God K’ of Tikal.”

The first comment must be addressed to the Long Count computation of the Initial Series. This is recorded as 9.12.6.15.11, but calculation reveals that this would reach the date 11 Chuen 4 Zip, which clearly is not recorded at G5 and F8. Whether it is the Long Count or the Calendar Round notation that is in error is resolved by the addition notation in the next clause, which, to anticipate, is the addition of 1.5.9.9 to reach 11 Ahau 18 Uo. If one reverses the calculation, one finds that 11 Ahau 18 Uo minus 1.5.9.9 reaches the day 13 Chuen 19 Kayab, exactly as is recorded at G5 and F8. By far the best correction of the Initial Series, therefore, is to change the Long Count position, to 9.12.*0.*10.11, involving changes in the tun and uinal coefficients.

This emendation is further confirmed by the fact that the glyph G and lunar data (recorded at F6–G7) are in accord with a 9.12.0.10.11 Initial Series date. The Lord of the

Night is given as the form G4—precisely as called for by an Initial Series 9.12.0.10.11 (the date 9.12.6.15.11 would call for G5). The much abbreviated lunar data records only glyphs C and D, both with a coefficient of 3. This is in agreement with the expected “Period of Uniformity” lunar data for the date 9.12.0.10.11, whereas for 9.12.6.15.11 we should expect 1C, and 18D.

One point of interest in the Initial Series is the form of glyph F (block G6). Although not unique (see Thompson 1950, Figure 34: 58, 68, etc.), the substitution of the “Jaguar bundle” for the more usual knot and the substitution of the female head (*na*) for the more usual affix T23 (*na*) are noteworthy. Another substitution which calls for comment is the suffix to the uinal sign at G4. This suffix is glyph T178, which I follow Knorosov (1967: 92, glyph K157) in reading *l(a)*, and which here, according to Knorosov’s synharmony theory (1967: 49–50), indicates the final *-al* of uinal. Moreover, it replaces the more usual suffix to the uinal sign, T102, which John Fought has convincingly read *-al* (Fought 1965).

The “event glyph” or verb (G8) of the Initial Series clause unfortunately is broken off, as is most of the following glyph F9. Enough of the latter glyph remains, however, for us to see an ear ornament, which enables us to reconstruct a head as the “main sign.” That this glyph is a name is indicated by the presence of the Tikal Emblem Glyph at G9, for Emblem glyphs almost invariably follow names. We can thus speculate that a personage from Tikal was the protagonist of the event: that this is indeed the case is proven by information given in the following clause.

CLAUSE 2 (F10–G22)

“It was 9 kins, 9 uinals, 5 tuns and 1 katun from the birth to (9.13.6.2.0)
11 Ahau 18 Uo, on which date occurred the accession as *ahau* . . . of
Shield-God K of Tikal . . .”

We have already seen that the first two dates are secured by the equation

$$\begin{array}{rcl}
 & 9.12.*0.*10.11 & 13 \text{ Chuen } 19 \text{ Kayab} \\
 \text{plus} & 1. 5. 9. 9 & \\
 \hline
 \text{equals} & (9.13. 6. 2. 0) & 11 \text{ Ahau } 18 \text{ Uo.}
 \end{array}$$

If it was 1.5.9.9 “from the birth to the accession,” and the accession occurred on 9.13.6.2.0, then the birth must have occurred on 9.12.0.10.11, i.e., on the Initial Series date of this monument. We can thus reconstruct “birth” as the verb of the first clause, at G8.

The accession statement at F14–G14 is Proskouriakoff’s (1960) “seating glyph” for accession plus her “affix cluster,” which apparently indicates to which title the ruler had acceded. In this case it was as *ahau* (given in its vulture form with the *Ahau* sign on his forehead).

The name of the man acceding to power is recorded at G20: it is a shield sign (T152) prefixed to the head of long-shouted god, which can be seen from other examples to be a variant of the head of God K. This name immediately precedes the Tikal Emblem glyph at H21. The form of the Emblem glyph is unusual, but not unknown at Tikal (see, for example, Lintel 3 of Temple IV, glyph block C3). We can, then, reconstruct the name of the Tikal personage at F9 of the first clause. I shall nickname this ruler "Shield-God K."

What of the glyphs intervening between the accession statement and "Shield-God K of Tikal"? The glyphs at F17–G17 occur at Palenque (Palace Tablet, H14–G15), where they serve to introduce Berlin's "triad" of gods (Berlin 1963). They seem to have a similar function here, for the glyphs at F18–G18 can be identified as the gods at the bow and stern, respectively, of the canoes on the bones MT38A and MT38B found in Burial 116 of Tikal (Figure 40.4, a). The two gods are also mentioned in the glyphic text of Stela C at Quirigua, at A8–B8 (Figure 40.4, d). The first of the gods has Jaguar attributes, while the second is distinguished by a stingray spine perforator stuck through the septum of his nose. The Tikal and Quirigua references would tend to indicate that this group of gods is simply a pair, but at F19–F20 on Dos Pilas Stela 8 are three additional deities, and these same five gods are recorded on Ixlu altar 1 (Fig. 40.4, e–f). I would suggest that these are tutelary deities. The presence of the first two deities paddling the dead Ruler A of Tikal into the underworld (Jones 1977: 39), the presence of the same two gods in the jaws of the double-serpent monster of the ceremonial bar (Figure 40.4, b), and their presence above portraits of rulers at Ixlu (Figure 40.4, c) and Jimbal would tend to support such a hypothesis.

The glyphs between the accession compound and the reference to the gods (i.e., at F17–F20) probably state the relationship that Shield-God K of Tikal had with those gods. The final three glyphs of the clause (G21–G22) are of uncertain significance, though I suspect that the last two are titles of Shield-God K. I have no idea why the "anterior date/event indicator" precedes them, although such a pattern is not uncommon at Dos Pilas, Seibal and other Pasión area sites.

CLAUSE 3 (F23–I1)

"It was 12 kins, 9 uinals and 4 tuns [from 11 Ahau 18 Uo] to (9.13.10.11.12) *5*Eb*10*Zac, on which date occurred the [event glyph is missing] concerning 'Ahau-God K' of Calakmul(?)."

Unfortunately, the central part of this clause is missing. The Distance Number is preserved, with a small part of the "posterior date/event indicator." Thus there is no difficulty in determining the date of the clause as (9.13.10.11.12) 5 Eb 10 Zac. This is confirmed by the calendrical data of the next clause, as we shall soon see. The verb of the clause has not survived, but the protagonist (I nickname him "Ahau-God K") is named at H1, along with the site whence he came. This Emblem glyph (I1) was first postulated by Joyce Marcus (1973: 912) as that of Calakmul; Jeffrey Miller (1974) supported the

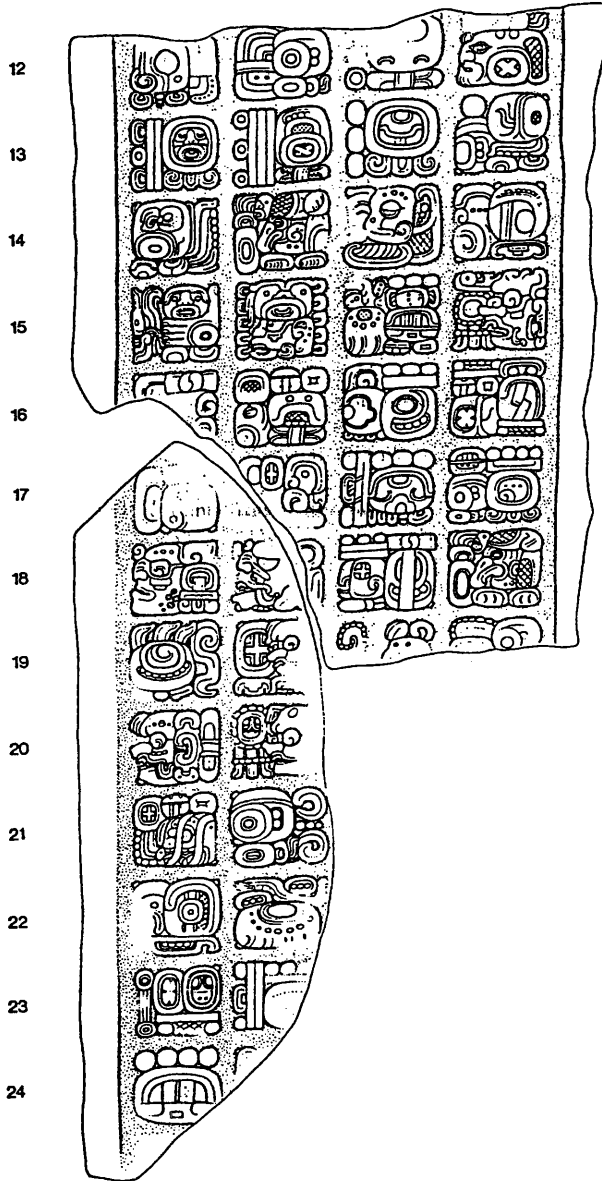


Figure 40.3. Dos Pilas Stela 8, back (Drawing by Ian Graham)

suggestion. There is still doubt, however, as to whether the Emblem glyph is in fact that of Calakmul or of some other important site nearby, such as El Peru.

We can deduce that the length of this clause was most likely 10 glyph blocks: 4 for the Distance Number, 2 for the date, the verb (F26), and some other glyph block preceding “Ahau-God K of Calakmul(?)” which is recorded at H1–I1.

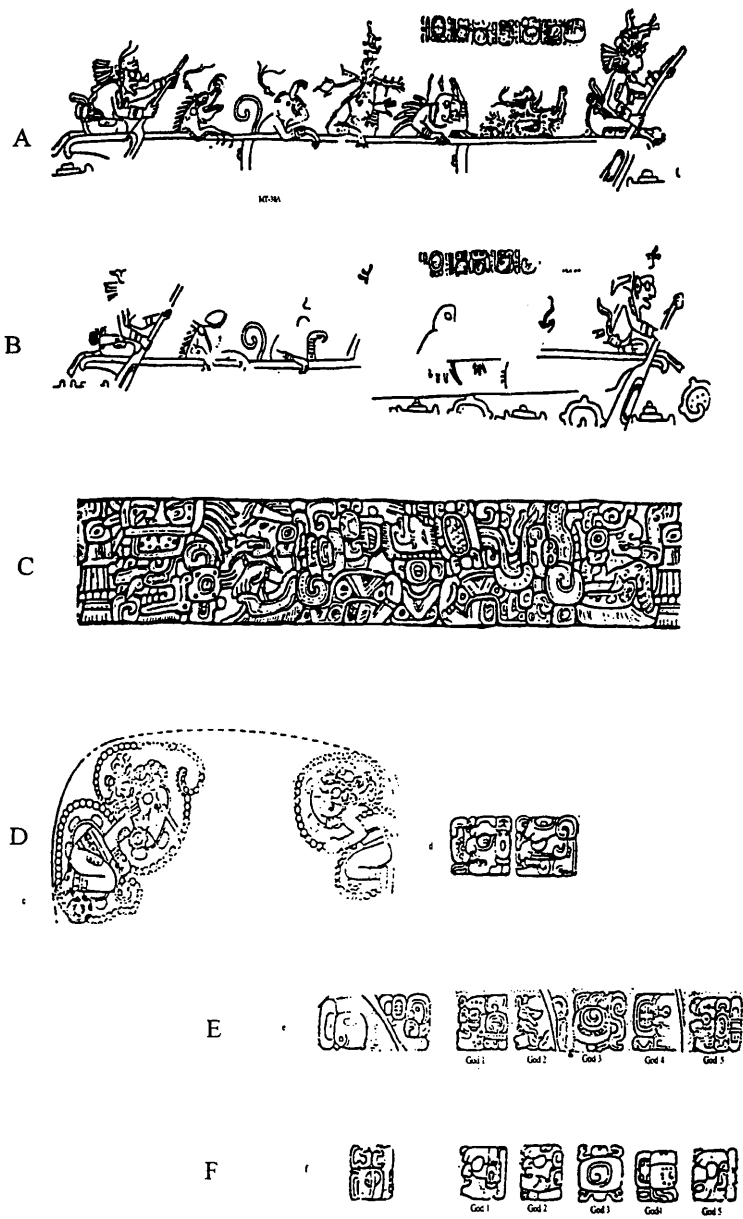


Figure 40.4. Tutelary deities at Dos Pilas and elsewhere

CLAUSE 4 (H2–H7)

“It was 8 kins, 6 uinals and 9 tuns [from 5 Eb 10 Zac] to (9.14.0.)0.0 6 Ahau 13 Muan, the end of a tun, on which date occurred [the event at I5], concerning Shield-God K.”

The mathematics of this clause are clear:

$$\begin{array}{rcl}
 (9.13.10.11.12) & 5 \text{ Eb } 10 \text{ Zac} & (\text{clause } 3) \\
 \text{plus} & 9. \text{ } 6. \text{ } 8 & \\
 \hline
 \text{equals} & (9.14.0.)0.0 & 6 \text{ Ahau } 13 \text{ Muan, End of a tun.}
 \end{array}$$

The verb is rare, but not unknown—most of its occurrences are at Chichen Itza. The date is a Period-ending one. Perhaps the most common Period-ending event glyph is T710, the so-called “hand-scattering” glyph. This “hand-scattering” glyph, in fact, usually has exactly the same affixes as the T590 mandible has at I5 of Dos Pilas Stela 8. These affixes could represent identical verbal inflections of two different verbs whose roots are written with the graphemes T710 and T590. An alternative explanation could be that the two main signs are allographs.

However the event be interpreted, the protagonist of clause 4 is clearly Shield-God K of Tikal, whose name is recorded at H7. The glyph at I6 appears to function as a title of this lord of Dos Pilas; we have already seen it at G22 in clause 2.

CLAUSE 5 (I7–I11)

“It was *19 kins, 1 uinal and 15 tuns [from 9.14.0.0.0 6 Ahau 13 Muan] to (9.14.15.1.19) 11 Cauac 17 Mac, when occurred the death of Shield-God K of Tikal.”

Again, the calendrics are clear—apart from the 19 kins, which can easily be reconstructed—and present no problem. The verb at I10 was first identified as “death” by Proskouriakoff (1963: 162–163) in the inscriptions at Yaxchilan; there can be no doubt now that her interpretation is correct.

Shield-God K of Tikal is named (H11–I11) as the person who died on this date. His age at death can be determined: 9.14.15.1.19 minus 9.12.0.10.11, or 2.14.9.8 (just under 54 years).

CLAUSE 6 (H12–I15)

“It was 4 days later, . . . (I12) . . . on (9.14.15.2.3) 3 Kan 1 Kankin that occurred . . . (verb at H14) . . . (I14) . . . concerning the 3 katun *ahpo* Shield-God K.”

There appears to be a problem with the calendrics here. The number of the coefficient at H12 in Ian Graham’s drawing shows 3 dots. However, on the evidence of the next clear calendrical data, in clause 7, we can reconstruct the date *expected* at H13–I13

as (9.14.15.2.3) 2 Akbal 1 Kankin. We can thus be reasonably sure that the coefficient was, or should have been, 4, leading to 9.14.15.2.3 from the preceding date 9.14.15.1.19. Thompson (1950: fig. 31#12–#20) shows several examples of the “inverted ahau” compound with numeral prefix: in every case, the number is small, and lies as a Distance Number of days between a preceding anterior date and a posterior date which follows. The compound can thus be paraphrased as “x days later.”

The 1 Kankin part of the Calendar Round date is also in accord with a “4 days later” Distance Number—i.e., 1 Kankin is 4 days later than 17 Mac. Four days later than 11 Cauac, however, is 2 Akbal, not 3 Kan as recorded at H13.

The first conclusion that one could draw from this is that the 3 Kan is a simple 1 day error of computation. While scribal errors are undeniable in several cases (as in the Initial Series above), other explanations are always preferable, if plausible ones can be found. In this case, such an alternative *can* be found: the date as recorded is typical of the “Puuc style” of dating first described by Proskouriakoff and Thompson (1947). Further discussion of this date, and of the glyph at I12, comprises Part II of this paper.

The verb of the clause, at H14, is unique (so far as I know) in the form as given. There are three probable parallel expressions, which I shall discuss in Part III of this paper. Glyph I14 is of uncertain meaning. We have already seen that the compound at H15a appears to be a title of Shield-God K of Tikal. Shield-God K is named at I15, with a “ben-ich” katun notation preceding his name at H15b. Although this form of the “ben-ich” katun notation is unique, it is very clear. The “ben-ich”—or *ahpo*, “royal,” as Floyd Lounsbury has convincingly read the affix (1973)—follows the katun notation, rather than coming between the coefficient and the katun glyph.

Proskouriakoff (1963: 153) has demonstrated that the “ben-ich” katuns referred to the current katun of the ruler’s life. Since Shield-God K of Tikal lived to be almost 54 years old, i.e., into his third katun, the notation here of “3 royal katuns” in association with his name presents no difficulties. In sum, even though the Tikal Emblem glyph is not recorded here, there can be no doubt that it is Shield-God K of Tikal who is the “protagonist” of this clause, even though he is recorded as having died 4 days earlier.

Glyphs H16–I16a are of uncertain significance, but they probably represent titles of Shield-God K of Tikal. At least there is precedence for the glyph at H16b as a title: it occurs, for example on Stelae 2, 5, 6, and 8 of Machaquila (I. Graham 1967). In these cases, the glyph lies between the Machaquila Emblem glyph and the title *bacab* (a reading first proposed by Kelley, 1962a: 306).

CLAUSE 7 (I16B–I20?)

“It was *12 kins and 3 uinals [from 9.14.15.2.3 3 Kan 1 Kankin] to (9.14.15.5.15) 9 Men 13 Kayab, on which date was the accession as *ahau* of ‘Scroll head–God K’ of Tikal . . .”

There is only one problem in this clause, apart from the fact that toward the end of the clause the stone is broken off: this lies in the kin coefficient of the Distance Number.

The Distance Number clearly leads forward to 9 Men 13 Kayab, where the day sign is clear, but an unusual form. If 3 uinals and 12 kins are added, rather than the 7 as indicated by the inscription, the date reached is 9 Men 13 Kayab:

$$\begin{array}{rcl}
 & (9.14.15. 2. 3) & 3 \text{ Kan } 1 \text{ Kankin} \\
 \text{plus} & & \\
 & 3.*12 & \\
 \hline
 \text{equals} & (9.14.15. 5. 15) & 9 \text{ Men } 13 \text{ Kayab.}
 \end{array}$$

There can be no doubt that this emendation of 7 kins to *12 is correct. It is interesting that the Calendar Round notation is again in the “normal” form, rather than the “Puuc” form, as was the preceding date. Possible ramifications of this are discussed in Part II of this paper. The verb of clause 7 is unmistakable: it is Proskouriakoff’s “ascension” or accession glyph with the “affix cluster” (Proskouriakoff 1960: 469–470). It thus appears that less than 80 days after the death of Shield-God K of Tikal, a new ruler was installed in office at Dos Pilas. Just who this new ruler was can be seen more clearly in another Stela at Dos Pilas and two at Aguateca. These three monuments all mention the same ruler, and the associated dates are all less than 10 tuns after the accession date on Dos Pilas Stela 8 (figure 40.5).

I shall nickname this ruler “Scroll head–God K of Tikal.” It appears that he ruled for at least 9 tuns at Dos Pilas, and also, apparently, at the neighboring site of Aguateca. The association of Tikal, Dos Pilas, and Aguateca at this time has interesting socio-political implications, which will not be considered in this paper (but cf. Marcus 1976a: 63ff.; Coggins 1975; W. Haviland 1977).

CLAUSE 8 (H21?–I26?)

There is far too much space at the end of this inscription for it to have been taken up by clause 7. It is mere speculation as to what would have been in the final 12 glyph blocks, H21–I26. If the pattern common at other sites were followed, one could expect some period-ending clause: here the obvious one would be 9.15.0.0.0. The clause, then, was possibly: “It was 5 kins, 12 uinals, and 4 tuns to 4 Ahau 13 Yax, the end of 15 katuns, on which date occurred (some period-ending rite) celebrated by Scroll head–God K of Tikal.”

II

We have already seen that the date recorded at H13–I13 is (9.14. 15.2.3) 3 *Kan* 1 Kankin, whereas the form to be expected is (9.14. 15.2.3) 2 Akbal 1 Kankin.

In view of the other calendrical errors we have seen on this monument (viz. 9.12.6.15.11 recorded instead of 9.12.0.10.11, as the Initial Series, and 3.7 recorded instead of 3.12, as the Distance Number at H17), one obvious conclusion would be that the 3 *Kan* statement represents yet another scribal error, and that the scribe miscalculated by one day too many in the *tzolkein* part of the date. However, such an interpretation should be



Figure 40.5. Texts of Scroll Head-God K of Tikal:

(a)	Dos Pilas	Stela 8	I17b-I19a	(9.14.15. 5.15)	9 Men	3 Kayab
(b)	Aguateca	Stela 8	B2b-C1 IS	(9.15. 0. 0. 0)	4 Ahau	13 Yak
(c)	Dos Pilas	Stela 16	C2-C6	(9.15. 4. 6. 5)	9 Chicchan	18 Muan
(d)	Aguateca	Stela2	B2b-C2	(9.15. 4. 6. 5)	9 Chicchan	18 Muan
(e)	Aguateca	Stela 2	G1-G5	(9.15)5. 0. 0	10 Ahau	8 Ch'en

avoided, in my opinion, wherever possible. There appears to be no way around the other two errors in this inscription, but in the present case there is: the date as recorded is an example of Proskouriakoff and Thompson's (1947) "dates such as 9 Ahau 17 Mol." In their article, Proskouriakoff and Thompson discussed a number of occurrences of such dates, where the *tzolkin* day count had slipped forward one day vis-à-vis the *haab* day count. This could also be the case with the 3 Kan 1 Kankin date under discussion here. Since this form of date was the type that Diego de Landa reported in sixteenth-century Yucatan, and since most of the examples Proskouriakoff and Thompson found were from Campeche, they labeled the style of date "Puuc." They further argued that where this type of date was found at other sites, it represented the introduction of the "Puuc" style of dating at those sites (see also Thompson 1952b).

While I think that Proskouriakoff and Thompson's general thesis is undoubtedly correct, there are several examples of "Puuc" style dates that cannot be explained very satisfactorily as representing the introduction of the "Puuc" style of dating at the site involved. One such example is the 3 Kan 1 Kankin date under discussion here. For if the date at H13-I13 is correct as recorded, and if it represents the introduction of the "Puuc" style of dating at Dos Pilas, then that form of dating was short-lived at Dos Pilas, for just

72 days later we find the “normal” form of date back in vogue: (9.14.15.5.15) 9 Men 13 Kayab, recorded at I17b–H18a.

A possible clue to the understanding of the 3 Kan 1 Kankin date is the glyph at I12, which lies between the Distance Number of 4 days and the Calendar Round date which follows. This glyph consists of the locative prefix *ti*, “in, at,” above a unique head sign. The head is that of an old man, and contains as infixes two elements: a *kin* sign and a cross-hatched area. Cross-hatching is indicative of blackness or darkness in the Maya hieroglyphs (Kelley 1976: 133), so it is quite possible that the glyph at I12 is a reference to the sun in his underworld journey during the night: with the *ti* prefix, it could be understood to mean “in the night,” or “at night.” The vast majority of events recorded in the Maya inscriptions, of course, can be assumed to have occurred during daytime; a small minority, however, no doubt took place during the night. Moreover, it is possible that the *tzolkin* day and the *haab* day began at different times in the 24-hour day; if so, we could expect a minority of dates to be not in the “normal” form. In other words: if, for example, the *tzolkin* day began at 6.00 P.M., and the *haab* day at 6.00 A.M., and some event took place at midnight, then the *tzolkin* date would be one position advanced with respect to the *haab* date. Thus (following the example above) the date 9.14.15.2.3 2 Akbal 1 Kankin would, after 6.00 P.M., be 9.14.15.2.3 3 Kan 1 Kankin—as recorded at H13–I13—and not until 6.00 A.M. The following day would the next “normal” date begin, viz., 9.14.15.2.4 3 Kan 2 Kankin.

This, of course, is highly speculative and involves the following assumptions: (1) that the various counts began at different times during the day (though not necessarily at the times given in the example above); (2) that the *tzolkin* day begin *earlier* than both the Long Count day and the *haab* day.

The speculation, nevertheless, has some support: (1) it obviates the necessity either of assuming an error in the recording of the *tzolkin* date at H13 or of regarding the date as the introduction of the “Puuc” style of dating at Dos Pilas, which seems unlikely; (2) it gives a very reasonable explanation of the glyph at I12, which quite likely is to be understood as “during the night.”

Further support for the “night” references lies in the fact that of the seventeen examples of the “Puuc style” of dating that I can find, nine are preceded by a *kin* glyph, and in four cases this *kin* glyph is “half-darkened.” Thus, for example, at Yaxchilan, the date of Stela 18 is recorded as “3 Eb 14 Mol,” and this date is preceded by a half-darkened *kin* (Figure 40.6, b). The tread of the Upper Step, Left Doorway, of Structure 44 at Yaxchilan (Figure 40.6, a) records the date “2 Chuen 14 Mol,” where the Long Count can be securely fixed at 9.14.17.15.11. Moreover, the clause accompanying both these dates is virtually identical, so there can be little doubt that 9.14.17.15.11 is the date on Stela 18 also. In both cases, the event glyph is “capture.” The captive has a long nominal phrase, perhaps an indication of his importance; Proskouriakoff (1963: 165) calls him “Chuen.” In the step inscription, the captor’s name is then given: in a long name phrase that continues on the riser of the step, “Shield-Jaguar” is named at I1.

The text of Stela 18, following the naming of “Chuen” as captive, appears to go into a second clause. At A10–A11 are two glyphs that Proskouriakoff (1973: 172) feels are “associated with bloodletting.” I agree, and suggest that the “bloodletting” on Stela 18 is

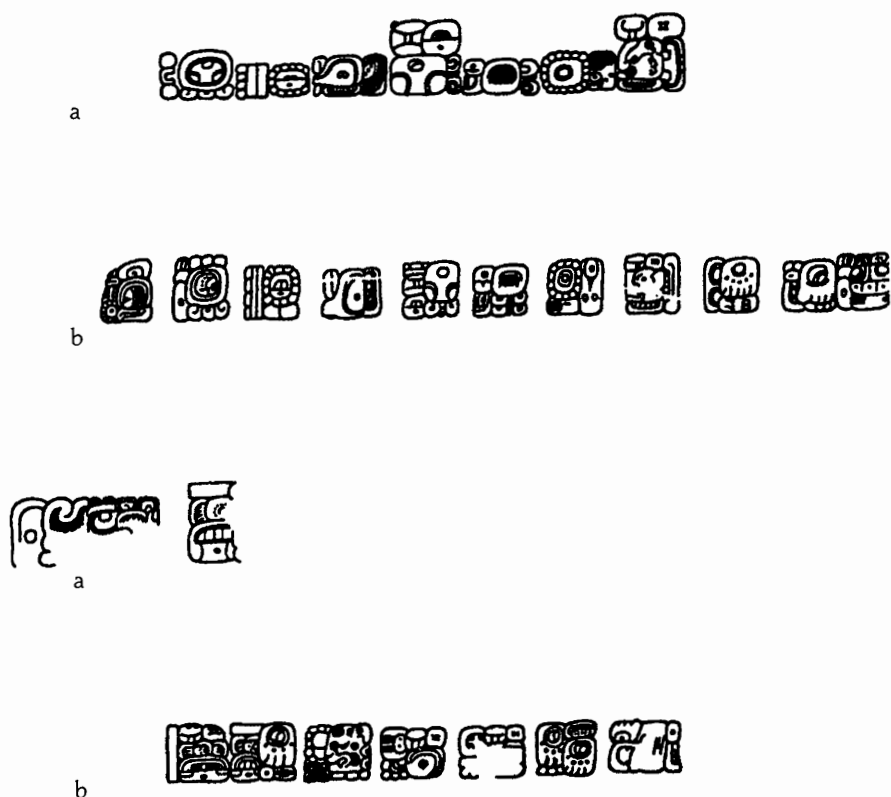


Figure 40.6. Two capture texts at Yaxchilan

the sacrifice of “Chuen” by Shield-Jaguar. Since the glyph at A1 is a half-darkened *kin* sign with a locative prefix, I would suggest that this sacrifice took place during the night. Shield-Jaguar is named at E4 as the protagonist of both clauses of Stela 18.

III

If the above hypothesis is correct, and the reference at H13–I13 of Dos Pilas Stela 8 is to a date at night, we might ask what was the event. We know that the event concerns Shield-God K of Tikal (who is mentioned at I15)—and yet Shield-God K died 4 days earlier!

There is a pair of clauses at Piedras Negras (“Lintel” 3: U1–V6) which are almost a direct parallel with the passage I9–I15 on Dos Pilas Stela 8 (see Fig. 40.6, a and b). Both passages begin with a death date. The Piedras Negras date is (9.16.6.11.17) 7 Caban 0 Pax, the date of death of Proskouriakoff’s Series 4 ruler of Piedras Negras (Proskouriakoff 1960). Then, three days later, on (9.16.6.12.0) 10 Ahau 3 Pax, was an event, the glyphs of which are transcribed T19:25H.181. The protagonist of the event is named at T6, and

there are reasons for thinking it is none other than the Series 4 ruler. The main sign of the name is a shield glyph, for which there are excellent grounds to give the reading *pacal* (Kelley 1968a; 1976: 181, 208; Lounsbury 1974b: ii; Mathews and Schele 1974: 63–64). An “altar” support from Piedras Negras (Maler 1901, pl. 11) and almost certainly dated from the Series 4 ruler’s reign, at (9.15.5.16.1) 6 Imix 4 Yaxkin, records as protagonist the glyphs T602:25:178, also read *pa-ca-l(a)*. I suggest that these are two references to the Series 4 ruler, whose more common name glyph is the head T1018a. Furthermore, at V6 on “Lintel” 3 is a 3 *ahau* katun notation—precisely the number of katuns to be expected with reference to the Series 4 ruler (who was born on 9.13.9.14.15 7 Men 18 Kankin, and thus lived to be somewhat over 56 years old).

Thus both these passages—Dos Pilas Stela 8: I9–I15 and Piedras Negras “Lintel” 3: U1–V6—are very similar in structure. Indeed, the only notable difference is in the form of the second verb: at H14 on Dos Pilas Stela 8 and at V5 on Piedras Negras “Lintel” 3. Both verbs have the “lunar” postfix T181, and the *ca* glyph, T25, as subfix (the Piedras Negras verb has it in head variant form—cf. Thompson 1944b and Kelley 1976, figure 45, on this particular interchangeability). The Piedras Negras verb, however, has T19 as its “main sign,” whereas the Dos Pilas example records a frog or toad head, T741a(var). In view of the structural similarity between the two passages, and the fact that the last two of the three signs of this verb are the same, it is probable that the head on the Dos Pilas example is a head variant of the T19 recorded on the Piedras Negras monument. We would then have two only slightly varying recordings of this verb:

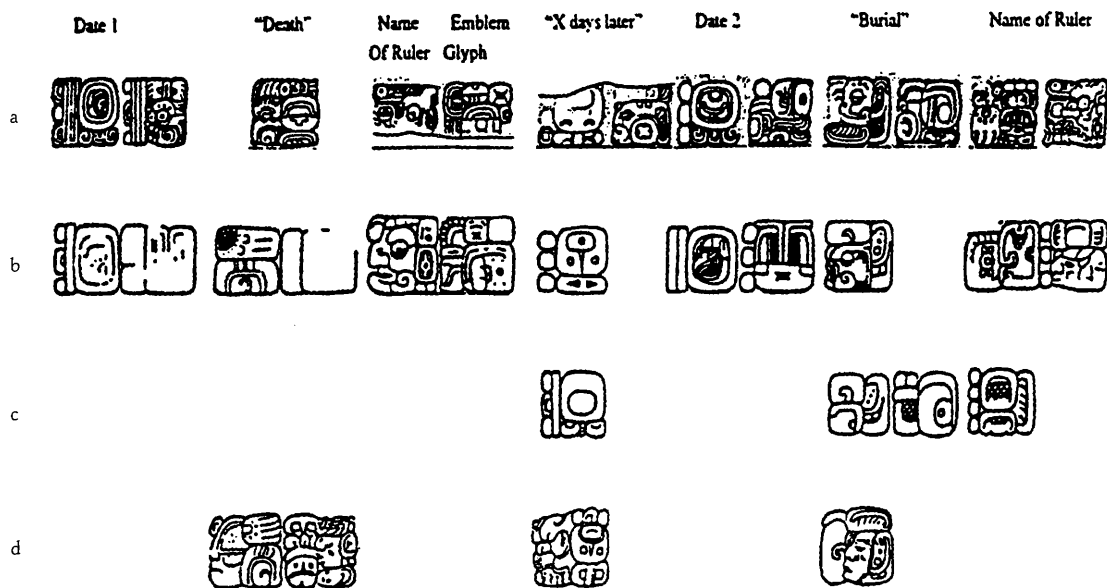


Figure 40.7. Death and burial statements: (a) Dos Pilas Stela 8: I9–I15; (b) Piedras Negras “Lintel” 3; (c) El Cayo Lintel 1: D11 . . . C13–D13 . . . D15; (d) Palenque Temple XVIII Stucco Glyphs

PIEDRAS NEGRAS	“Lintel” 3: V5	T19:25H.181
DOS PILAS	Stela 8: H14	T115.19H:25.181

It is apparent that T115 is an optional prefix.

As is the case with most of the Maya hieroglyphs, a profusion of readings has been proposed for each of these signs:

T19 (Zimmerman 91, 1310; Knorosov 135; Evreinov, Kosarev and Ustinov 144)

Thomas	(1893: 265)	<i>m</i>
Whorf	(1942: 484)	<i>n, an, ne</i>
Knorosov	(1955b: 23; 1967: 89)	<i>m(u)</i>
Evreinov, Kosarev, and Ustinov	(1961: 2:256)	<i>muan, m(u)</i>
M. Coe	(1966: 169 and pers. comm.)	<i>m(u)</i>
Barthel	(1969: 40)	<i>koch?/ci?</i>
	(1977: 98)	<i>koch/bi?</i>
Cordan	(Barthel 1969: 40)	<i>mu</i>
Thompson	(1972a: 151)	<i>koch</i>
Kelley	(1976: 113, 181–85)	<i>m(u)</i>
Lounsbury	(pers. comm.)	<i>m(u)</i>
Schele	(pers. comm.)	<i>m(u)</i>

T25 (Z84; K028; N023)

Landa	Tozzer 1941: 170)	<i>ca</i>
Brasseur de Bourbourg	(1869–70: 1:202)	<i>ca</i>
Thomas	(1893: 266)	<i>c</i>
Whorf	(1942: 484)	<i>ca</i>
Knorosov	(1955b: 24; 1967: 79)	<i>c(a)</i>
Evreinov, Kosarev, and Ustinov	(1961: 2:253)	<i>ca, c(a)</i>
Fought	(1965: 269)	<i>ca</i>
Barthel	(1969: 37)	<i>cVI?/cah?</i>
	(1977: 98)	<i>cal</i>
Thompson	(1972a: 151)	<i>ca</i>
Kelley	(1976: 135, 176)	<i>c(a)</i>

Dütting	(1977: 98)	<i>cal/ca</i>
Lounsbury	(pers. comm.)	<i>c(a)</i>
Schele	(pers. comm.)	<i>c(a)</i>
<i>T81 (Z60;K034;N030)</i>		
Landa	(Tozzer 1941: 170in example for <i>ha</i> , “water”)	<i>ha</i>
Thomas	(1893: 255, 260)	<i>ha, hi, ah, hal</i>
Seler	(1902–23: 1:698)	<i>ah</i>
Thompson	(1950: 188)	<i>u</i>
	(1965b)	<i>aan?</i>
	(1972a: 151, cf. also pp. 34–35)	<i>kal</i>
Knorosov	(1955b: 28)	<i>h, ah</i>
	(1967: 79) = K140	= <i>h(a)</i>
Evreinov, Kosarev, and Ustinov	(1961: 2:253)	<i>(a)h</i>
M. Coe	(1966: 169 and pers. comm.)	<i>h(a), ah</i>
Barthel	(1967: 237; 1977: 99)	<i>ic</i>
Cordan	(Barthel 1969: 31)	<i>ac, aj</i>
Kelley	(1976: 196–197)	<i>ah</i>
Lounsbury	(pers. comm.)	<i>h(a), ah</i>
Schele	(pers. comm.)	<i>h(a), ah</i>
... and the optional prefix, <i>T115(Z6; K078)</i> .		
Knorosov	(1955b: 19)	<i>kuul, ku</i>
	(1967: 85)	<i>tich</i>
Barthel	(1965: 151)	<i>noh/nim</i>
	(1977: 98)	<i>noh/xac?</i>
Cordan	(Barthel 1969: 15)	<i>xac</i>
Thompson	(1972a: 151)	<i>okol, yokol</i>

It is obvious that all of the points in evidence for and against these readings cannot be discussed in this paper: the reader is referred to the sources cited for discussions of the

proponents’ readings. All we can do is consider all these as alternative hypotheses, and test the readings when new glyphs are found that present new combinations and environments of those particular signs.

One such new combination is the verb under discussion here. On the basis of occurrences in other contexts, I favor the following readings for these four signs. Some of the other contexts of the signs, where in my view the reading has reasonable support, are also given below:

T19 *m(u)*

T1.568:19	<i>ulum(u)</i>	“turkey”
T 19:130:116	<i>muan</i>	(month Muan)
T 19: 59	<i>mut(i)</i>	“bird”

T25 *c(a)*

Z1331a:T2 5	<i>zec (a)</i>	(month Zec)
T557:25	<i>mac(a)</i>	(month Mac)
T602:25:178	<i>pacal(a)</i>	“shield”
T25:25:130	<i>cacau(a)</i>	“cacao”
T25:556	<i>cab (a)</i>	“earth”
T25:520:130	<i>cazeu(a)</i>	(Kekchi? form of month Zec)

T181 *h(a),ah*

Cf. the third sign in Landa’s example for *ha*, “water” (Tozzer 1941: 170)

Also present as postfix to a large number of glyphs that because of their location can be interpreted as verbs. Because of the associated dates, the T181 postfix can be interpreted as a “past tense” suffix (see also Kelley 1976: 196–197).

T115 *tu*

T115.614:601	<i>tuyotoch</i>	“in his house”
T115.765:178	<i>tuyocol</i>	“his entering”

I follow Floyd Lounsbury in reading T115 as *tu*. Unfortunately, Lounsbury has not published all of the supporting evidence for this reading, but a brief discussion with reference to the glyph *tuyotoch* may be found in Lounsbury (1973: 119, note 9).

We are left, then, with the hypothesized reading (*tu*)-*mu-ca-h(a)* for the verb under discussion here. Although, of course, this is not the only reading that could be offered, it should be stressed that the readings of these component signs do have support from other contexts. The next step in checking our hypothesis (or rather, four hypotheses) is,

obviously, to look up some Maya dictionaries and see if *(tu-)mucah(a)* is recorded in any of them. We could expect it to be a verb, whose root is *muc-*, but more than that, for it will be remembered that in both cases the personal referent of the verb has just died (3 and 4 days, respectively, earlier than the event). With this in mind, let us check the dictionaries:

LANGUAGE and Reference	English/Spanish/German	Maya
YUCATEC		
Martínez Hernández 1929: 634–635	enterrar los difuntos	muc.ah.ub
Ciudad Real, ca. 1577 [1984]: 105	enterrar	muc
Solís Alcalá 1949: 83	enterrar	muc, ah
ITZA		
Schumann 1971: 83	sepulcro	mucnal
MOPAN		
Owen and Ventur 1972: 142	enterrar, enterrar una cosa	muk
CHORTI		
Fought 1972: 277	they are burying	aʔmuhká
CHOL		
Schumann 1973: 88	enterrar	muk-eʔ/muk-u
CHONTAL		
Smailus 1975: 157	you hid it	amuki
TZOTZIL		
Laughlin 1975: 243	bury, hide (t.v.)	muk
TZELTAL		
de Ara 1571 [1986]: 70V	enterrar, esconder	muc
Berlin and Kaufman 1962: 116	enterrarlo	-muk
PROTO-TZELTAL-TZOTZIL		
Kaufman 1972: 110	esconder, enterrar	*-muk

TOJOLABAL

Jackson 1952: 42	enterrar	-muc
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JACALTEC

Church and Church 1955: 34	enterrar	muj
Day n.d.: n.p.	enterrar (v.t.)	muj-u'

MOCHO

Kaufman 1967: 103		muq
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MAM

Carreño 1916: 85	enterrar	mukum
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IXIL

Stoll 1887: 119	verbergen, begraben	muj
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QUICHE

Edmonson 1965: 75	bury	muq
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CAKCHIQUEL

Sáenz 1940: 275	enterrar (v. act.)	mukumaj tu
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KEKCHI

Sedat 1955: 109	enterrar (v.a.)	mukuc
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These entries not only meet the expectation of being a verbal form, but also make excellent sense for the context of the verb under discussion here. After all, there are not too many events that can concern a recently dead man; his burial is an obvious candidate.

Some further discussion of these verbal forms is perhaps called for. In modern Yucatec *tu mucah* means “he/she/it buried him/her/it”; this verbal form is (1) active, (2) transitive, (3) past, (4) third person singular subject, and (5) third person singular object. (4) and (5) are implied, and need not be stated explicitly; in other words, the agent and patient may be named separately, but do not need to be so named if obvious from the context. The patient is named on Dos Pilas Stela 8, following the verb *tu mucah*; he is Shield-God K of Tikal. The agent is not named in this clause, but as we have noted, need not be named where he is obvious from context. The only case where the context would be obvious in this text would be if the agent of the burial clause were the agent of the following verb also—i.e., “Scroll head—God K” of Tikal, who is the subject of the accession verb in the following clause. This clause structure is common both in modern Mayan languages and

in the Classic Period inscriptions; for example, in the Tablet of the Cross and the Temple XVIII “Jambs” at Palenque.

Tu mucah in modern Yucatec is literally *tu* (his₁) *muc* (the buried one) *-ah* (was) $\emptyset$ (ha₂: the third person singular patient is a $\emptyset$ suffix), i.e., “he₂ was the object of his₁ burial,” or simply “he₁ buried him₂.” Without the *tu-* prefix, all reference to the agent (“he₁”) is omitted. *Mucah* means literally *muc* (the buried one) *-ah* (was) $\emptyset$ (he), or “he was the buried one”; English would usually record this as “the burial of him,” or simply “his burial.” We should not expect, therefore, to see the agent of the burial of the Series 4 ruler named in Piedras Negras “Lintel” 3. And indeed he is not named—certainly not in the “burial” clause, and hardly in the following clause either; for Proskouriakoff’s Series 7 ruler is named as the protagonist of that clause, and he was only seven years old at the date of the Series 4 ruler’s burial.

If the above interpretations are correct, we see at Dos Pilas that Shield-God K of Tikal died on (9.14.15.1.19) 11 Cauac 17 Mac, and 4½ days later, during the night, on (9.14.15.2.3) 3 Kan 1 Kankin, he was buried. Then, 72 days after his burial, his successor acceded to power at Dos Pilas; on (9.14.15.5.15) 9 Men 13 Kayab. A similar picture emerges at Piedras Negras: the Series 4 ruler died on (9.16.6.11.17) 7 Caban 0 Pax, and was buried 3 days later, on (9.16.6.12.0) 10 Ahau 3 Pax. One hundred and four days after his death, his successor, the Series 5 ruler, was inaugurated at Piedras Negras (on 9.16.6.17.1 7 Imix 19 Uo—see Proskouriakoff 1960: 459).

I have been able to find two other examples of the *mucah* glyph. One is on El Cayo Lintel 1 (Maler 1903, pl. 35—see figure 40.6, c of this paper). Unfortunately, parts of the inscription are badly weathered. At C3–D3 is the date (9.16.12.2.6) 13 Cimi 19 Zotz’. Although much of the text immediately following D3 is weathered, at D11 is a glyph that is perhaps an example of the short Distance Number that has already been seen at H12 of Dos Pilas Stela 8. On the El Cayo lintel, the coefficient is 7. Following this possible “7 days” glyph, there is a verbal expression, and then the anterior date indicator. This is followed at C13 by a glyph that is transcribed T19:528.181. Readings *mu* and *-ah* for T19 and T181, respectively, have already been proposed in this paper. I accept Knorosov’s (1967: 91) and Kelley’s (1976: 174–176) reading *c(u)* as one of the possible readings of T528. This would produce an overall reading *mu-c(u)-ah* or *mucah* for this glyph. The second “u” merely echoes the vowel of the verbal root, following the principle of “synharmony” (Knorosov 1967: 49–50). After *mucah* comes a glyph very similar to the one that follows *mucah* on Dos Pilas Stela 8, and then comes the name of the ruler. At E2 is a Distance Number of 2 uinals and 4 kins, leading forward to an accession date. Thus the pattern on El Cayo Lintel 1 is exactly the same as on Dos Pilas Stela 8: a short Distance Number forward to “burial” and then another short Distance Number forward to the accession date of the next ruler. This pattern invites speculation that the glyph at C12 of the El Cayo lintel might be a reference to death. I shall not go into the matter here, except to say that the glyph is prominent in Michael Coe’s (1973) “Primary Standard Sequence,” which he has convincingly argued is a funerary text of some kind. So there are some intriguing possibilities for the glyph at C12 as being an expression for “death” or some ceremony related to it.

The other example of *mucah* is in the stucco inscription of Temple XVIII at Palenque (Figure 40.7, d). Unfortunately, this inscription has not been resolved, for most of the

glyphs fell one by one off the back wall of the temple, and very little in the way of a consecutive text has survived. Among the fallen glyphs, however, there survive, in addition to the *mucah*, a “death” expression and a “2 days later” Distance Number. Since these glyphs together fit so well the pattern we have seen at Dos Pilas, Piedras Negras and El Cayo, I have included them in Figure 40.7. It would be rash at this time to attempt to reconstruct the dates on which the death and burial events might have occurred.

We have, of course, excellent evidence that the ancient Maya placed great importance on funerary activities (witness the Temple of the Inscriptions at Palenque). We also have several good early sources for early post-conquest Maya funerary customs. Both Landa (Tozzer 1941: 129–32) and Las Casas (Miles 1957: 749–50) give fairly detailed information on the funerary practices of the Yucatec and Pocomam Maya, respectively. Neither source, however, mentions the time of day (or night) of the funeral. From the fact that the Piedras Negras burial took place, apparently, during the day, and the Dos Pilas burial (if my interpretation is correct) during the night, it appears that there was no set rule for the classic Maya. It is noteworthy, however, that the Tarascans of west Mexico buried their lords in a ceremony which started after midnight (*Relación . . . de Michoacán* 1956: 218–23). Thus at least there is evidence from elsewhere in Mesoamerica that burials took place during the night.

IV

To summarize this paper, it has been seen that the inscription on the back of Dos Pilas Stela 8 provides a brief biography of a ruler whom I have called “Shield-God K” of Tikal. The monument was no doubt erected by his successor, “Scroll head-God K” of Tikal, partially in memory of his predecessor, but partly to record his own accession to power. It should be pointed out here that I use the phrase “of Tikal” because these rulers contain the Tikal Emblem glyph in their name phrase. I do not mean to imply that they ruled over Tikal, nor that they physically came from Tikal. Rather, I suspect that they were descendants of a noble family of Tikal, most likely a junior branch of Tikal’s royal family—one of whose members left Tikal to found his own dynasty in the Pasión area, some 110 km to the southwest of Tikal.

The biography of Shield-God K of Tikal is especially interesting because it contains not only the record of his birth, accession, and death, but also a probable reference to his burial. The burial glyph is only rarely recorded elsewhere in classic Maya inscriptions.

ACKNOWLEDGMENTS

I should like to thank Profs. Floyd G. Lounsbury, Linda Schele, David H. Kelley, and Michael D. Coe for their helpful comments during earlier drafts of this paper. Thanks are also due to Ian Graham and William R. Coe for their kindness in allowing me to use their drawings among the illustrations for this paper.

An earlier version of this paper was presented in Guatemala City in June 1977, at the International Symposium on Maya Art, Iconography, and Hieroglyphic Writing.

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Part Six

Supernaturals

The systematic study of Maya religion began with the work of Paul Schellhas, whose identification of figures and names of deities in the Postclassic codices led to all later work on the subject. In this effort Schellhas received considerable support and encouragement from his friend and mentor Eduard Seler. Seler's interpretations of Maya religion were highly influenced by his knowledge of Mexican religion and iconography. Although debatable in some of its aspects, Seler's body of research established the foundation for current understandings of Mesoamerican religion (Taube 1992: 5).

Another approach to the supernatural world of the Maya drew on the rich evidence of Postclassic Yucatec religion, as filtered through the Books of Chilam Balam and other Colonial documents. The most vigorous advocate of this approach was J. Eric Thompson, who believed strongly that Postclassic religion represented the harvest of seeds planted at a far earlier date: throughout, his research emphasized cultural continuity, resilience, and homogeneity (e.g., Thompson 1970: 161). Recent study has tended to confirm Thompson's (1970: 161) assertion that religious shifts between the Classic and Postclassic periods were relatively small. The major gods of Schellhas had precedents in Classic period iconography, although some gods prominent in earlier times tended later to diminish in importance. Nevertheless, Postclassic religion did contain a vital component of Mexican belief, introduced into Yucatan during the Terminal Classic and Postclassic periods and maintained as a "separate but equal" iconographic system (Taube 1994: 244). Likewise, Mexican iconographic traits, originating mainly from Teotihuacan, were present in Classic-period art and religion (Stone 1989). To an extraordinary extent, the Maya displayed a full and intricate comprehension of a few foreign iconographies, although their reasons for incorporating such elements probably derived from local rather than imposed concerns, of using the "other" to distinguish elites from nonelites (Stone 1989: 167–68), and of linking Late Classic dynasties with the exalted qualities of earlier civilizations (D. Stuart 2000).

While continuities existed, Maya religion was far from static and uniform. In studying it, due consideration must be paid to temporal and regional variation. A case in point is the group of gods identified by Heinrich Berlin in the pathbreaking article reproduced here. Although the gods of the Palenque Triad appear elsewhere in Maya art, their consistent grouping and association with a definite set of mythological events are attested only at Palenque. In contrast, the pair of gods known as "the paddlers" (see Mathews' article "Notes on the Inscriptions on the Back of

Dos Pilas Stela 8," this volume) are much more evenly distributed throughout the texts and iconography of the Classic Maya Lowlands, although they apparently enjoyed a special relationship with the lords of Tonina, Chiapas.

Michael Coe's article helped open yet another line of inquiry into Classic-period religion. Coe detected pronounced similarities between gods of the Classic period and mythical characters in the *Popol Vuh*, a document in Quiche Maya most likely cobbled from several sources. Relevant for an understanding of these parallels is René Acuña's (1975, 1985) suggestion that the mythological section of the *Popol Vuh* derived from oral traditions of the Verapaz or probably of the Acala Indians—rather closer to the southern Lowlands, the source for many of Coe's iconographic data.

Recent research has posed important new questions in the study of Maya religion. In particular, the decipherment of the way glyph, discussed in the last article of this section, has stimulated new discussions of Classic Maya religion, especially in regard to shamanistic elements and companion spirits or "co-essences" (see also Freidel et al. 1993; Grube and Nahm 1994). Today we have a better notion of the complexity of Maya religion, of acts of creation and varieties of fable. Yet much remains to be done: What is the significance of god lists, such as that on *Dos Pilas Stela 8*? What regional variability exists for Classic Maya gods, apart from the clear example of the *Palenque Triad*? How can we meld folkloric images, as of rabbit tricksters (G. Stuart and G. Stuart 1993: 170–71), with accounts from mythological cycles, such as those found in the *Popol Vuh*? How do narratives on some Classic ceramics fit into a larger mythological story? These and other questions await the next generation of Maya epigraphers.

“Representation of Deities of the Maya Manuscripts”

Paul Schellhas

With this article, Paul Schellhas made a lasting contribution to the study of Maya writing and religion. He developed a technique—still used by epigraphers (see Grube and Nahm 1994) that includes the following steps: the careful recognition and listing of iconographic features displayed by particular supernatural figures and then the detection of consistent associations between these figures and their probable name glyphs. Schellhas was prudent in another respect. Instead of linking these supernaturals with gods known from Colonial Yucatec texts, he designated them with letters, thus avoiding precarious or insecure identifications. Nevertheless, by observing the iconic attributes of each god, he proposed something of their supernatural roles and behaviors. Schellhas' article forms the basis for all subsequent work on Maya religion, particularly a groundbreaking book by Karl Taube (1992) that provides substantial new information on the nature and features of Maya gods.

[pp. 7–9]

THE MATERIAL OF THE MANUSCRIPTS

The three manuscripts which we possess of the ancient Maya peoples of Central America, the Dresden (Dr.), the Madrid (Tro.-Cort.) and the Paris (Per.) manuscripts, all contain a series of pictorial representations of human figures, which, beyond question, should be regarded as figures of gods. Together with these are a number of animal figures, some with human bodies, dress and armor, which likewise have a mythologic significance.

The contents of the three manuscripts, which undoubtedly pertain to the calendar system and to the computation of time in their relation to the Maya pantheon and to certain religious and domestic functions, admit of the conclusion, that these figures of

Excerpted from Schellhas 1904 (English translation of Schellhas 1897).

gods embody the essential part of the religious conceptions of the Maya peoples in a tolerably complete form. For here we have the entire ritual year, the whole chronology with its mythological relations and all accessories. In addition to this, essentially the same figures recur in all three manuscripts. Their number is not especially large. There are about fifteen figures of gods in human form and about half as many in animal form. At first we were inclined to believe that further researches would considerably increase the number of deities, but this assumption was incorrect. After years of study of the subject and repeated examination of the results of research, it may be regarded as positively proved, that the number of deities represented in the Maya manuscripts does not exceed substantially the limits mentioned above. The principal deities are determined beyond question.

The way in which this was accomplished is strikingly simple. It amounts essentially to that which in ordinary life we call "memory of persons" and follows almost naturally from a careful study of the manuscripts. For, by frequently looking attentively at the representations, one learns by degrees to recognize promptly similar and familiar figures of gods, by the characteristic impression they make as a whole, or by certain details, even when the pictures are partly obliterated or exhibit variations, and the same is true of the accompanying hieroglyphs. A purely inductive, natural science-method has thus been followed, and hence this pamphlet is devoted simply to descriptions and to the amassing of material. These figures have been taken separately out of the manuscripts alone, identified and described with the studious avoidance of all unreliable, misleading accounts and of all presumptive analogies with supposedly allied mythologies.

Whatever cannot be derived from the manuscripts themselves has been wholly ignored. Hypotheses and deductions have been avoided as far as possible. Only where the interpretation, or the resemblance and the relations to kindred mythologic domains were obvious, and where the accounts agreed beyond question, has notice been taken of the fact so that the imposed limitations of this work should not result in one-sidedness.

Since, for the most part, the accounts of Spanish authors regarding the mythology of the Mayas correspond only slightly or not at all with these figures of gods, and all other conjectures respecting their significance are very dubious, the alphabetic designation of the deities, which was tentatively introduced in the first edition of this work, has been preserved. This designation has proved to be practical . . .

It is a well known fact that we possess no definite knowledge either of the time of the composition or of the local origin of the Maya manuscripts. The objection might, therefore, be raised that it is a hazardous proceeding to treat the material derived from these three manuscripts in common, as if it were homogeneous. But these researches themselves have proved beyond a doubt, that the mythologic import of the manuscripts belongs to one and the same sphere of thought. Essentially the same deities and the same mythologic ideas are, without question, to be found in all the manuscripts.

The material of the inscriptions has been set entirely at one side, because the style of representation contained in them, both of the mythologic forms and of the hieroglyphs, renders comparison exceedingly difficult. In this field especial credit is due to Förstemann and Seler, for the work they have done in furtherance of interpretation, and

mention should not be omitted of the generosity with which the well known promoter of Americanist investigations, the Duke of Loubat, has presented to the Berlin Museum of Ethnology costly originals of reliefs and inscriptions for direct study. The representations on the reliefs from the Maya region, it is true, give evidence of dealing with kindred mythologic conceptions. Figures and hieroglyphs of gods, made familiar by the manuscripts, can also be found here and there. But on the whole so little appears in support of instituting a comparison with the manuscripts, that it seems expedient to leave the inscriptions for independent and special study.

[pp. 24–25]

E. THE MAIZE GOD

This god bears on his head the Kan-sign and above it the ear of maize with leaves (Figure 41.1, 23); compare Dr. 9b (left figure), 11b, 12a, etc. The hieroglyph is definitely determined (Figure 41.1, 21). The god is identical with the figures recurring with especial frequency in the Madrid manuscript, the heads of which are prolonged upward and curved backward in a peculiar manner; compare Cort. 15a, 20c, 40 (bottom), Tro. 32*b (Figures 41.1, 25–27) and especially the representation in Dr. 50a (Figure 41.1, 24), which is very distinct. This head was evolved out of the conventional drawing of the ear of maize; compare the pictures of the maize plant in the Codex Tro., p. 29b (Figure 41.1, 22) with the head ornament of the god in Dr. 9b (Figure 41.1, 23), 9a, 12a; what was originally a head ornament finally passed into the form of the head itself, so that the latter appears now as an ear of maize surrounded by leaves. Compare the pictures, Figures 41.1, 25–27. That these gods with elongated heads are, in point of fact, identical with E is plainly seen from the passage in Dr. 2 (45)c (first figure). There the figure represented, which is exactly like the pictures in the Madrid manuscript, is designated explicitly as god E by the third hieroglyph in the accompanying writing.

The hieroglyph of this deity is thus explained; it is the head of the god merged into the conventionalized form of the ear of maize surrounded by leaves. When we remember that the Maya nations practiced the custom of artificially deforming the skull, as is seen in particular on the reliefs at Palenque, we may also regard the heads of these deities as representations of such artificially flattened skulls.

God E occurs frequently as the god of husbandry, especially in the Madrid manuscript, which devotes much attention to agriculture. He seems to be a counterpart of the



Figure 41.1. The Maize God

Mexican maize-god Centeotl. The passages in the Madrid manuscript (Tro. 29a and Cort. 39a, 40a) are very remarkable, where the deity E is represented in the position of a woman in labor with numerals on the abdomen; perhaps the underlying idea is that of fruitfulness.

In the Codex Cort., p. 40, this grain-deity is pictured with a tall and slender vessel before him, which he holds in his hands. It is possible that this is meant to suggest a grain receptacle; to be sure, in the same place, other figures of gods likewise have such vessels in their hands. At any rate, it is interesting to note that in the passage already mentioned (Dr. 50a) god E also holds a similar tall and slender vessel in his hands.

According to all appearances the scene pictured in Dr. 50a has reference to the conflict of the grain-god with a death-deity. The latter, the figure sitting on the right, is characterized by a skull as a head ornament and seems to address threats or commands to god E, who stands before him in the attitude of a terrified and cowed individual.

Furthermore god E has nothing to do with the powers of the underworld; he is a god of life, of prosperity and fruitfulness; symbols of death are never found in connection with him. Brinton calls this god Ghanan, equivalent to Kan; it is possible, too, that he is identical with a deity Yum Kaax who has been handed down to us and whose name means "Lord of the harvest fields."

According to Förstemann the day dedicated to this god is Kan.

[pp. 32–34]

K. THE GOD WITH THE ORNAMENTED NOSE

This god, as already mentioned in connection with B, is not identical with the latter, but is probably closely related to him. His hieroglyph in Figure 41.2, 42–43 is the form in the Madrid manuscript. He is closely related to god B. He is represented in Dr. 25 (centre) where he is perhaps conceived of as a priest wearing a mask with the face of the god, also in Dr. 7a, 12a (with his own hieroglyph and that of E!), 26 (bottom) with a variant of the sign. His figure without the hieroglyph occurs in Dr. 3. Very frequently the well-known group, 3 Oc, is given with him and in connection with his hieroglyph (in Dr. 3, 7a, 10b (right); without picture, 12a). Förstemann ("Drei Maya-hieroglyphen," *Zeitschrift für Ethnologie*, 1901, pp. 215–221) sees in this the sign for good days, a proof that we have to do here with a benevolent deity well disposed to mankind, his kinship with B being also in favor of this interpretation. His hieroglyph alone without his picture occurs in Dr. 10b, 49 (middle and bottom), 58 (bottom, left), and Tro. 8*b; with a variant of the attribute in Dr. 24 (third vertical row). A slight variation appears also in Dr. 69 (top, right).



42.



43.

Figure 41.2. The god with the ornamented nose

In Dr. 65a (middle), B is pictured. But in the text we see K's hieroglyph presented by a hand. The next figure on the same page at the right represents god B with the head of K on his own and the same head once more in his hand. Agreeing with this, we find in the accompanying text the signs of B and K, the latter in a hand. K seems to be pictured again in Dr. 46 (bottom); the passage, however, is somewhat obliterated. The hieroglyph is lacking in this place; it is found, however, on the preceding page 45 (middle).

In addition to the passage already mentioned, which represents god K together with B, such double deities again occur in the Paris manuscript, p. 13, where B holds K's head in his hand; in Dr. 34b, where he carries this head on his own and in Dr. 67a where he appears to carry it in a rope. Once, however, a variation of these plainly synonymous representations occurs, namely in Dr. 49 (at the top), where we see a feminine form above whose head rises the head of god K. In the Paris manuscript, so far as its defaced condition permits us to recognize the representation, K occurs very frequently, as for example, in Per. 3, 4, 5, 6, 7 and 9 (in part only his head is given, presented by god B, as in the Dresden manuscript).

Brinton considers this figure simply as a special manifestation of B and identical with that god. Förstemann thinks that god K is a storm-deity, whose ornamental nose, according to the conventional mode of drawing of the Central American peoples, is intended to represent the blast of the storm.

Apparently, however, the deity has an astronomic significance and seems to symbolize a star. In favor of this is the fact that on the so-called initial pages of the Madrid manuscript (Cort. 22–Tro. 36) a row, composed of repetitions of his sign, occurs below the signs of the cardinal points and parallel to a row composed of signs of god C, the god of the polar star and the north. The hieroglyphs of C and K are the only hieroglyphs of gods, which are repeated 13 times on these pages with the 13 days enumerated there. The two gods must, therefore, have either a parallel or an opposite astronomic and calendric meaning. The fact that in Dr. 25 and 26 K appears as regent of the year, is an argument in favor of his astronomic significance.

According to Förstemann, Muluc is the day dedicated to god K.

In the head of god K we recognize the ornament so common in the temple ruins of Central America—the so-called “elephant's trunk.” The peculiar, conventionalized face, with the projecting proboscis-shaped nose, which is applied chiefly to the corners of temple walls, displays unquestionably the features of god K. The significance of god K in this architectural relation is unknown. Some connection with his character as the deity of a star and with his astronomic qualities may, however, be assumed, since, as we know, the temple structures of Central America are always placed with reference to the cardinal points.

[pp. 46–47]

SUMMARY

An enumeration of the most important deities in the manuscripts gives the following results, in connection with which is to be noted that, of course, the numbers cannot be

absolutely correct, because one or another of the pictures occasionally remains doubtful. As far as possible, however, only the positively determined representations have been considered.

The deity occurring most frequently in the Dresden Manuscript is god B, who is pictured there 141 times. Following him in point of number in the same manuscript are the death god A pictured 33 times, god D 19 times, and gods C and E and 14 times respectively.

In the Madrid Manuscript, god D, with 84 pictures, is the most frequent occurrence. He is followed by the maize-god E with 76 pictures, god B with 71, god A with 53, C with 38, and M with 37 pictures.

In the Paris Manuscript, god E's picture can be verified 8 times, those of C and B 6 times each, and that of god A twin N and K are also frequently represented.

An enumeration of all the pictures in all the manuscripts shows that the following deities occur most frequently and are therefore to be considered the most important:

1. God B: pictured 218 times.
2. God D: pictured 103 times.
3. God E: pictured 98 times.
4. God A: pictured 88 times.
5. God C: pictured 61 times.
6. God M: pictured 40 times.
7. God F: pictured 33 times.

Furthermore, interesting conclusions can be arrived at, by means of a list of those deities, who occur in the representations of the manuscripts, so *united* or *grouped together* as to make evident that they must stand in some relation to one another. *Mythologic combinations* of this kind occur among the following deities and mythological animals:

1. In the Dresden Manuscript: D and C, B and C, dog and vulture, bird and serpent, B and K.
2. In the Madrid Manuscript: F and M, B and M, C and M, E and M, A and E, A and D, A and F, B and C, D and C, D and E.
3. In the Paris Manuscript: N and K, B and K.

The most common of these combinations are those of the deities A and F, M and F, A and E, D and C. These groups are entirely intelligible, consisting of death-god and war-god, god of the traveling merchants and war-god, death-god and maize-god (as adversaries: meaning famine), night-god and deity of the polar star.

“The Palenque Triad”

Heinrich Berlin

In this article Heinrich Berlin paved the way for a new generation of studies on Maya gods of the Classic period. His perceptive isolation of glyph clauses associated with the Palenque Triad—a set of three gods consistently grouped together at the site—and his identification of these glyphs as names represented a fundamental advance. It moved debates about Classic Maya religion beyond texts of the early Colonial period and Schellhas’ list of gods in the codices. This is not to say that Berlin departed entirely from prior evidence. The presence of Schellhas’ God K constituted an important piece of data in his discussion of the Triad. But Berlin’s study did contain much that was strikingly new and innovative, for it emphasized the use of internal evidence and the search for regularities, both in the texts themselves and in their architectural provenience. Berlin’s understanding of the Triad remains more or less intact, although there have been substantial additions to knowledge, including David Kelley’s application of Proskouriakoff’s dynastic findings to a mythological context (e.g., Kelley 1965; see also Lounsbury 1976, 1980, 1985; Schele and Freidel 1990; Taube 1992). Some aspects of the Triad continue to elude decipherment: in our opinion, the name glyphs remain poorly understood, as does the relation of GII to his broader analogue, God K, or, for that matter, of GIII to the Sun God. Maya epigraphy still needs an exhaustive study of references to gods in Maya inscriptions. We can thank Berlin for showing that such a study is possible.

Sweeping attempts to “read” the Maya inscriptions have failed time and again and there is little chance that they will succeed in the near future. One of the reasons for these failures seems to be that the vast non-calendaric material has not even been properly organized. Few efforts have been made so far to work out how glyphs interact, affect others, and may be related to specific dates. In other words, more studies of patterns are necessary. Such studies will show whether all Maya cities use the same patterns or different ones; just as with individual glyphs there may be general patterns as well as very local ones. The common patterns, then, most likely will treat the same subject matter, the local ones topics peculiar to the cities where they occur exclusively. Further:

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though a pattern discovered for one town may not be found to work for other cities, it still may give clues for solving problems at other sites.

In the present study we are going to experiment with three non-calendric glyphs very prominent in the inscriptions at Palenque. For this study the illustrations should be consulted in the publications cited in the reference list at the end of this paper.

At Palenque even the casual visitor cannot fail to be struck by the similarity between the temples of the Cross (TC), Foliated Cross (TFC) and Sun (TS), and to recognize that these three temples, grouped around a plaza, form a very specific unit in the general layout of the city. Thus the visual impression already anticipates the formula: three in one. Studying the temples more closely one could demonstrate how TC and TS show, within the group, the widest differences and that TFC keeps a middle position: now leaning more towards TC, now more towards TS. It is not necessary to elaborate here on the proofs for the foregoing statement, but we may say already that our study will bear it out from a completely new viewpoint.

Besides the famous inner tablets of the sanctuaries each temple originally had a great wealth of additional inscriptions:

the sanctuary door jambs,
the sanctuary outer tablets,
the stuccoed piers,
the balustrade slabs.

The latter were leaning against the bases of the balustrades of the upper stairway sections. Of these slabs, the right ones, going up, are almost identical at the TC and the TFC, but quite different at the TS.

The left slabs follow the same pattern in all three cases: a very early Calendar Round date, always contained also on the inner tablet of the respective sanctuary, followed by three intervening glyphs, a distance number and the date 9.12.19.14.12 5 Eb 5 Kayab. Of the three intervening glyphs two are once more identical on the three slabs, only one is different: TC has a Kin-like face (hereafter called GI) with a rather roundish eye and a strand of hair on the cheek (Figure 42.1, 1). TFC has a reclining full figure (GII) (Figure 42.1, 2). The corresponding glyph of the slab of the TS must be on a still missing portion.

Thus these three left slabs differ from each other only by different starting dates which condition different distance numbers, and by one glyph which is peculiar to each slab. It seems likely, therefore, that the peculiar glyph has a special relationship to the whole respective temple. This is indeed the case.

For the TC the typical glyph is GI, which occurs on the main tablet at D8, D11 (with special affixes), D 16 and also on the right outer sanctuary tablet. It is found also on Blom's tablet I (1926-27, vol. 1, Figure 158). In an earlier paper (Berlin, 1957) I have shown that tablet I must have served as a sanctuary door jamb. Although according to Blom it was found behind the TS, I suggested the possibility that it could have belonged to the TC. Though it is true that GI occurs also once on the TS (Q10, close to the date 9 Akbal 6 Xul, which occurs also on the TC) this glyph is much more typical for the TC and this fact strengthens my belief that tablet 1 came from the Temple of the Cross.



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9

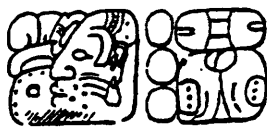


Fig. 10



Fig. 11

Figure 42.1. Triad and related glyphs

Apparently completely isolated GI appears also on tablet III of the Temple of the Inscriptions (T1) at O12.

GI is frequently preceded by a very specific glyph which has a dot as prefix (Figure 42.1, 4). In Palenque this latter glyph never appears in other contexts.

There is yet another glyph linked somehow—but how?—with GI, always preceding it, never following it. This glyph has the numeral 6 as prefix, a superfix of two Ben signs, the so-called A1 subfix and a symbolic main element (Figure 42.1, 5). I have found it four times:

TC: D10; GI at D11

TI, II: M8; GI at N9

Blom's tablet 1: (B3); GI at (B4)

TC outer sanctuary tablets: left sanctuary tablet; GI on the right one.

GII is the typical glyph for the TFC. As previously stated this is a reclining full figure which has the head of the "long-nosed god With flare in forehead"; or instead of this head its symbolic substitute. Essential is moreover a scroll-and-comb affix on top or in front of the knee. In two cases at Palenque, where one would expect to find GII, viz. TI, tablet I, C12 and tablet III, M12, only the head is portrayed but with the definite addition of a prefix. Though in both cases this prefix is severely damaged, there can be little doubt that originally the scroll-and-comb prefix was carved there. GII occurs on the sanctuary main tablet at D2, C6, M4, and at A9 on the right sanctuary doorjamb.

This glyph, too, is very often paired by another glyph composed of a rodent with the so-called bone subfix (Figure 42.1, 6). As the association of these two glyphs is not constant and as the rodent glyph with bone subfix appears also with other glyphs, the latter seems to contain a concept which is not exclusively linked with the former.

The typical glyph for the TS is one which might be called the checkerboard glyph (GIII), as the glyph consists of essentially two elements: a face in a frame and a checkerboard. The glyph may, in addition, be prefixed by a band in which a Kin element is prominent (Figure 42.1, 3). GIII occurs on the main tablet at D6 (where the band prefix is missing, but is attached as a postfix to the preceding glyph at C6) and O6; also as a stucco glyph on the piers.

In the Palenque inscriptions these three glyphs appear not only individually but also as a triad: always all three of them, never two. I have found the following occurrences of this triad, always in the order of GI–GII–GIII:

TFC : *N9–O10*

Palace, House C stairway: block C2

Palace tablet: E10–E12 ;. H15–17

TI, I: B8–B9; *D11–E1*; F9–F10

TI, II: *FS–E7*

TI, III: *A5–B6*

In the italicized cases the triad is followed or preceded by a glyph composed of three dots, a main element with crossed bands, a subfix and a postfix. One can hardly fail to interpret the three dots as having reference to the triad. For lack of a better name I shall call this glyph “Ox-compound 1” to distinguish it from other similar ones in the Palenque texts.

We can even refine this compound further. Apparently the affixes are always the same, but their sizes differ. Thus Ox-compound 1A has a short postfix and a long subfix (Figure 42.1, 8). It is used exclusively where the three triad glyphs appear together.

Ox-compound 1B has a short subfix and a long postfix (Figure 42.1, 7). It is associated with individual triad glyphs: with GII at L3–M4 in the TFC and N11–M12 on TI, HI; with GIII at N6–O6 in the TS. We find it alone at O7 of the TC, there apparently completely isolated and with no reference to the triad. However, in that same column is a distance number 6.11.6, the same which occurs also in the TFC, leading in both cases to the date 9.12.18.5.16 2 Cib 14 Mol. This date precedes in the TS glyph GIII and in the TFC glyph GII. So I think we are justified in assuming that also in this particular case of the Temple of the Cross, Ox-compound 1B refers to a trim glyph, here naturally GI.

At B18 of the north tablet of Temple XVIII is shown a glyph very similar to Ox-compound 1; it is, however, neither 1A nor 1B, since instead of one postfix it has two postfixes. Whether one should consider it to be a still less understood 1C remains an open question. There is certainly no triad glyph to be found anywhere on the Temple XVIII inscriptions.

There is yet another glyph possibly but not necessarily linked with the triad (Figure 42.1, 10). It occurs three times on the tablets of TI always before a triad expression.

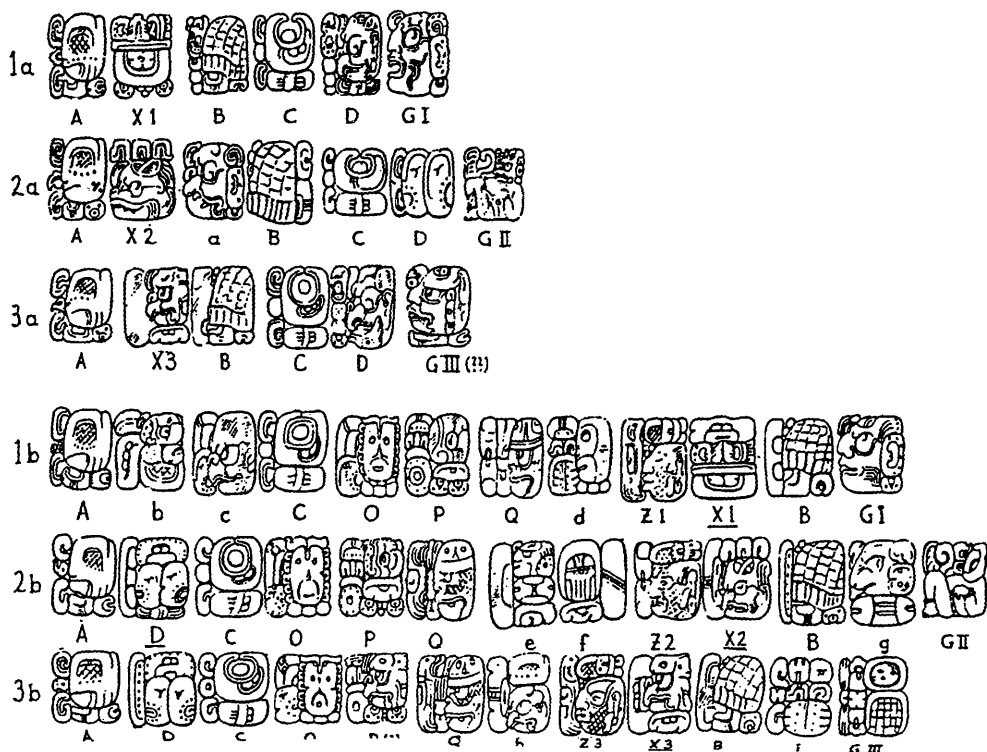


Figure 42.2. Six related clauses, Temple of the Inscriptions, Palenque

A very interesting presentation of the triad—not listed above—is found on tablet II of the TI in three pairs of related clauses. The rather irregular way in which these six clauses are written, passing from one vertical row to the next one, makes the immediate understanding difficult and therefore I present them in a horizontal scheme (Figure 42.2).

- 1a) C5–D7 A—X1—B—C—D—GI
- 2a) C8–E1 A—X2—*a*—B—C—D—GII
- 3a) F1–E4 A—X3—B—C—D—(GIII??)
- 1b) I4–J9 A—*b*—*c*—C—O—P—Q—*d*—Z1—*X1*—B—GI
- 2b) K3–K9 A—*D*—C—O—P—Q—*e*—*f*—Z2—*X2*—B—*g*—GII
- 3b) L9–M5 A—*D*—C—O—P(?)—Q—*h*—Z3—*X3*—B—*i*—GIII

Constant components are designated by capital letters and non-constants are shown by small letter; *g* is, of course, the rodent with bone suffix, here in its function as pre-glyph to GII. Glyphs X, Z and G (the latter the triad glyphs) seem to be different in each clause, but I suspect an underlying unifying concept. Their specific differences are made clear through added numerals.

When in the second series a glyph has a prefix different from the corresponding prefix in the first series, then it is shown italicized.

The a) series is followed by a complete triad expression; the b) series by Ox-compound 1A only.

In the above clauses the sequence of the triad glyphs is the accustomed: GI–GII–GIII. GIII seems to absent in the a) series. The place in E4, where one would expect it, is occupied by a Kin-like face with and Ahau on his forehead and two hooks as subfixes. Could this be a genuine substitute for GIII?

Glyph GI at J9 is followed by a prefixed Chicchan god. The same pairing is found at N9–M10 preceded by the GI accompanying glyph at M9. Thus, there seems to be definite linkage of 3 glyphs, and the glyph at N10 (once more a compound with three dots) very likely refers to this fact (Figure 42.1, 9).

The meaning of these six clauses is still a mystery, but the following lines of approach may be, perhaps, a step towards its solution. As the a) series are shorter and less complicated we are going to concentrate on them.

All (as do the b) series, too) start with the same glyph: A. This I take to be the inscriptional form of Zimmermann's glyph 166 of the codices (Figure 42.1, 11), which he considers to belong to the thematical glyphs, that is to say glyphs which stand at the beginning of certain texts and are limited to closed sections.

From the way X, B, C and D are paired in the b) series it is further obvious that X and belong together on the one hand and C and D on the other. (Glyph a perhaps is nothing else but a substitute for the missing prefix of B in line 2a; or it could have something to do with the fact that the head of X2 is different in the two series.)

Thus in reality we have only four different concepts per line: the thematical glyph (A) at the beginning—a triad glyph at the end (G)—a constant expression (C–D) and a varying expression (X–B), related to the respective triad glyph.

This arrangement of four concepts is extremely frequent in the codices and as there one of the four glyphs often is that of a god, we may conclude that either the X or the G (or both) glyphs stand for divine personalities.

To make the parallelism complete we ought to have also "pictures." In some way the central parts of the three sanctuary tablets may stand for them. Probably it is not chance alone that in the TC the "cross" stands above the elements which compose XI and that these same elements are also present on the staff held by the small priest, and also on that of the person depicted on the left outer sanctuary tablet of the same temple.

Now, what do the three discussed glyphs stand for?

Embedded as they are in chronological contexts, which span more than 3000 years, a likely guess would be that they stand for three different cycles, which occasionally meet. In favor of this theory speaks that in each of the three temples the Initial Series is followed by a short distance number leading always to a day with coefficient 1. Unfortunately in the TS the corresponding date 1? 10 Tzec has not yet been convincingly fixed in the Long Count. Neither do we know with what dates the triad goes—provided it does go—on TI, I. In short, I have been unable to find any satisfactory mathematical explanation.

Do they stand for mythological beings, gods?

We have seen above that GI is frequently preceded by a glyph with a dot as prefix; this suggests a reading of Hun GI itself shows certain similarities with the true Kin

glyph, and the related XI glyph, too, has a very conspicuous Kin element. So we might venture to read both glyphs as Hun-abku and Colop-u-uich-kin, two different names for the same creator god according to Roys (1943, p. 73).

At the beginning before 2.0.0.0.0, the three supposed gods appear independently. Then, after say 9.4.0.0.0, they somehow join forces often acting as a unit. But this power or realm ended around 9.13.0.0.0 8 Ahau 8 Uo, that crucial date for Palenque. None of the three supposed gods, nor the associated Ox-compound 1, is related to a date beyond it. In the Chilam Balam of Chumayel (Roys, 1933a, p. 76) there exists the following reference: "Katun 8 Ahau came. 8 Ahau was the name of the Katun when their government occurred. Then there was a change of the Katun, then there was a change of rulers . . . Then the law of another Katun was introduced, at the end of the Katun when Ix-Tyiunene was brought . . . Now began the archery of Ox-halal Chan . . ." Could it be possible that this text has something to do with the discussed situation at Palenque?

The equating of glyphs with gods in the monuments implies, quite naturally, a search for the same in the codices. The god with flare in his forehead has, since the days of Seler (1902–23), been identified as Bolon Tzacab or God K. So we could be satisfied. However, I don't believe that matters are as simple as that. Into the hodge-podge of the equation: god with flare in his forehead = Bolon Tzacab = God K have gone faces with or without fleshless jawbone, with or without number 9 attached, with or without the scroll-and-comb affix, etc.; sometimes one may even question whether the flare is present. I think the study of the importance of affixes has advanced sufficiently to render this hodge-podge highly suspicious. For instance, in the clause which accompanies the 819 cycle, one of its glyphs has tentatively been identified as God K (Berlin and Kelley, 1961); but there, in none of the known cases it has the 9 or Bolon prefix. As it stands, the equation has become useless and it will require further study in order to obtain a workable reinterpretation. The rodent with bone suffix, too, is known from the Dresden codex, but as the few occurrences of them are not limited to associations with gods it cannot be used as proof in either direction.

In TI, II the Chicchan god, known also from the codices, is closely associated with GI. Zimmermann (1956, p. 164) has already pointed out certain relationships between the Chicchan and the Sun gods. The mentioned association, then, argues slightly in favor of the assumption that the G glyphs really stand for gods. Our above analysis of the six clauses pointed into the same direction. Outside Palenque I know of only one case strikingly similar to our triad complex: stela 26 at Tikal (Shook, 1958). This stela is undated and, for the moment, does not help to solve our problem. This brief excursion, though somewhat suggestive in favor of a divine theory, is still far from being conclusive.

Returning to firmer ground I think one can state with a fair degree of assurance: each of the three Palenque temples emphasizes a special concept of more or less the same category, since they can be joined or considered as an aggregate as is implied by the Ox-compound 1 glyph. In the latter the three dots are to be read in the true numerical sense and not figuratively; the established differences A and B seem to imply something like "the members of the triad" and "a member of the triad." Whether in all other Palenque Ox-compounds the number 3 is always to be considered as truly numerical and not

figurative remains open to study. The discussed facts go to show that at Palenque the number 3 played a significant role also.

It would have been more satisfactory had we been in a position to state that each of the three temples was devoted to a special god, who acted individually during the mythical dawn, and often jointly with the other two—as a kind of Trinity—during the historic period of Palenque until 9.13.0.0.0, when a new era was ushered in with other ruling deities, but the presented facts alone are not yet sufficient to sustain this.

“Supernatural Patrons of Maya Scribes and Artists”

Michael D. Coe

Michael Coe is unusual in Mesoamerican studies for his ability to write comfortably on Aztec and Maya topics, dirt archaeology and epigraphy, and the history of Maya decipherment, addressing the needs of both lay and specialist readers. Born in 1929, in New York City, Coe spent his early years there and in Long Island, where his family lived on the north shore. In summer, Coe often moved, along with his family, to Cody, Wyoming, to the former Buffalo Bill Cody ranch, purchased by Coe's grandfather in the early years of this century. From an early age, and perhaps in part because of his experiences in the West, he became intensely interested in Native Americans. As a teenager, he traveled with his brother William Coe to Yucatan and Belize (then British Honduras), where the Coes undertook reconnaissance and minor excavations (Coe and Coe 1949). After attending St. Paul's School, in New Hampshire, Coe graduated from Harvard University, receiving his A.B. in 1950 and his Ph.D. in 1959. During part of the Korean conflict, Coe served as an advisor to the Nationalist Chinese army in Formosa and adjacent islands, where he had contact with the top leadership and, not surprisingly, given his wide and diverse interests, with the indigenous hill tribes of the Formosan mountains. After a year of teaching at the University of Tennessee, Coe moved to Yale University, where he reached the rank of professor in 1968 and, eventually, the Charles J. MacCurdy Professorship at Yale, from which he retired in 1994. Along with Floyd Lounsbury and George Kubler, Coe made Yale the leading center for the study of Pre-Columbian art and writing in the 1970s and 1980s. The high quality of the collections at Dumbarton Oaks, Washington, D.C., is probably due to Coe's influence as advisor to the Pre-Columbian wing during the formation and early growth of this research center.

*As a graduate student, Coe questioned Eric Thompson's views of "cycle 7" monuments, proving Thompson to be in error; he suggested at an early date that historical interpretations of Maya cities needed to be reintroduced, and, with David Kelley, championed Knorosov's Maya syllabary. One of his most influential publications is *The Maya Scribe and His World* (Coe 1973). This volume, based on exhibition at the Grolier Club in New York City, revolutionized*

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the study of Maya vases and their texts. Coe demonstrated several points in this book: that Maya pots systematically recorded Maya myths, including antecedents of the narratives recorded in the *Popol Vuh* of the Quiche Maya, that the texts followed a coherent, legible pattern, and, above all, that such objects merited focused attention. Subsequent folios and publications brought more of these ceramics to scholarly attention, with a format inspired partly by the magnificent folios published by George Gordon and J. Alden Mason (1925–34). Many fine artists rendered or photographed ceramics for Coe: Felipe Dávalos, Diane Griffiths Peck, and, above all, Justin Kerr, at present the preeminent photographer of Mesoamerican antiquities, for which he developed his “roll-out” camera. (The subject of such Mesoamericanist artists, including the important Guatemalan illustrator Antonio Tejeda Fonseca and Mary Louise Butler [see Dosker 1985], is underexplored.) During this time, Coe received criticism for publishing objects without provenience. But it is equally clear to epigraphers that, without these resources, crucial decipherments would never have happened.

The following article represents a good example of Coe’s approach. It integrates a wide variety of evidence, ethnographic, ethnohistorical, epigraphic, and iconographic, to render a convincing portrait of the “patron monkey of scribes.” Here as elsewhere, Coe establishes and follows a model of research that has led to solid advances in Maya iconographic studies. We can add a few things—the skeletal tail as an attribute of the scribe monkeys, the probable reading of some name glyphs for scribes as *Its’aat* and *Chuween*—but this remains a classic article and one of Coe’s personal favorites.

SCRIBES AND ARTISTS AMONG THE AZTEC

The high regard in which those who wielded brush and ink were held in ancient Mesoamerica is well brought out by the description of the Aztec scribe or *tlacuilo* in Book 10 of Sahagún:

The scribe: writings, ink [are] his special skills. [He is] a craftsman, an artist, a user of charcoal, a drawer with charcoal; a painter who dissolves colors, grinds pigments, uses colors.

The good scribe is honest, circumspect, far-sighted, pensive; a judge of colors, an applier of the colors, who makes shadows, forms feet, face, hair. He paints, applies colors, makes shadows, draws gardens, paints flowers, creates works of art. (Sahagún, 1961: 213)

Although all of our surviving pre-Spanish books from non-Maya Mesoamerica are folding screens of deer hide coated with gesso, the Nahuatl name for the “book of days,” *tonalamatl*, suggests that originally, at some point in the distant past, these were of bark paper from the *amatl* tree, and that leather manuscripts were a more recent innovation. Likewise, “writing” in the Aztec tongue is *tlilli tlapalli*, literally “black and red,” implying that they might well have looked more like Maya hieroglyphic books than the extant Mexican pictorial codices.

It certainly seems, from the passage quoted, that the Aztec painter and scribe were the same person. Those individuals lucky enough to have been born under the *trecena* sign One Monkey were destined to attain artistic prowess:

And he who was then born they regarded favorably. They said that if it were a man who was then born, he would entertain others and give them solace. Nowhere would he be hated; everyone would be his friend. And he would be, perchance, a singer, dancer, or scribe; he would produce some work of art. For such, then, was his day sign, One Monkey. (Sahagún, 1957: 82)

The day sign Monkey (Nahuatl *Ozomatli*) was presided over by the pleasure god himself, Xochipilli (Seler, 1963, 1: 15); on Borgia 13, a monkey dances before him on that day.

THE POPOL VUH

It is my contention that the Maya held a very similar set of beliefs, associating monkeys or monkey-men with the arts of painting, writing, music, and dance. These beliefs are best seen in the great epic of the Quiché Maya ruling house called the Popol Vuh (Schultze Jena, 1944; Recinos et al., 1950; Edmondson, 1971), and center on the doings of a pair of brothers called Hun Batz and Hun Choven; their names both mean One Monkey (or, more properly, One Howler Monkey), Batz corresponding to *Ozomatli* in the Quiché calendar, and Choven (or Chuen) to it in that of the lowland Yucatec Maya. They are the step-brothers of the famous Hero Twins, Hunahpu and Xbalanque, through their father Hun Hunahpu. They are described as flautists, singers, writers, carvers, jewellers, and silversmiths.

Hun Hunahpu, the father, had at one time married the lady Xbaquiyalo, by whom Hun Batz and Hun Choven were born. However, the father and his brother, Vucub Hunahpu, were forced to journey to the Maya version of Hell, Xibalbá, where they both lost their lives after a series of deadly encounters with the Underworld lords. At that time, the severed head of Hun Hunahpu was hung up in a calabash tree and miraculously impregnated the lady Ixquiq ("Lady Blood"), who was expelled from Xibalbá by the angry lords once her condition had been discovered. The babes in her womb were the future Hero Twins, Hunahpu and Xbalanque. Now, Hun Batz and Hun Choven had stayed behind on the surface of the earth in the house of the somewhat malevolent old woman, the mother of Hun Hunahpu and Vucub Hunahpu, when these latter had been summoned to the Underworld. When Ixquiq arrived from Xibalbá, obviously pregnant, she was given a chilly reception by the old lady, who was jealous for her living grandchildren, Hun Batz and Hun Choven. Xquiq was assigned impossible tasks by her. At one time, she was told to gather maize from the old woman's field, but there was only one maize stalk to be seen there; however, the soon-to-be-born Hero Twins were under supernatural protection, and ears grew magically which were harvested by animal helpers. At last the Hero Twins were born and grew into strong youths, but their grandmother told the favored Hun Batz and Hun Choven to get rid of them, and they tried to do so. The latter, jealous and red-faced from anger, but nonetheless described as "great men and sages," ate up all the food the Hero Twins, Hunahpu and Xbalanque, had brought in by their hunting prowess and refused them entry into the house. One day, the Hero Twins came back without having killed any

birds with the blowgun, and the grandmother was furious with them. The twins said that their prey had become stuck in a tree after having been shot, and asked that their elder brothers climb up it to get them down. Accordingly, Hun Batz and Hun Choven scaled the tree, but soon took fright and wanted to climb down. The Twins told them to untie their loincloths, and tie them up again with the long end like a tail behind, then they would be able to walk.

The foolish Hun Batz and Hun Choven complied, and were transformed into monkeys. When the Hero Twins came back to the house without them, the grandmother was much aggrieved, so the Hero Twins sarcastically played the song "Spider-Monkey Hunter" on flute and drum. The music induced their simian step-brothers to return dancing to the house, at which their grandmother was convulsed with laughter. They fled three times, only to come back home, but the fourth time, Hun Batz and Hun Choven remained in the forest. The author of the Popol Vuh comments that in his day they were still invoked as the patron gods of musicians, singers, painters (*ah tz'ib*, "he of the writing"), and sculptors. This was, of course, the same role played by Ce Ozomatli or One Monkey among the central Mexicans.

The role of One Monkey as patron of the arts was apparently widespread in the highland Maya area. For the Pokomam of the Verapaz region of Guatemala, Las Casas (1909: 619) tells us that the old creator couple, "Xchel" and "Xtcamna" (surely Ix Chel and Itzamná) produced 13 children, the two youngest being named "Hunchevan" (i.e. Hun Chuen or Hun Choven, One Monkey) and "Hunhan." The latter must be an error for Hun Ahau, corresponding to the Quiché Hun Hunahpu, actually the father of One Monkey, suggesting that the good bishop had telescoped some of the genealogy given in the Popol Vuh. At any rate, he says of them:

All of the craftsmen, such as painters, sculptors, silversmiths, and the like, worshipped and made sacrifices to those younger sons named Huncheven and Hunahan, because they had bestowed upon them talent and skill to work their crafts in a polished and perfect manner, and even though they worshipped them as divine men, they did not consider them as the common god supreme over all . . .

ARTISTS AND SCRIBES IN LATE PRE-CONQUEST YUCATAN

Landa unfortunately says very little about the painterly and scribal arts in Yucatan. About the best information is that given for the manufacture of idols in the months Mol and Chen (Tozzer, 1941: 159–60). The work was done under the supervision of priests, and these commissioned craftsmen who were under powerful taboos during the period. The idols were made of cedar wood, which the artists fashioned with "instruments for sculpturing the black gods." Their priestly patrons paid them with birds, game, and money. There are also several references in the testimony regarding idolatry taken in 1562 to wooden masks, and the evidence of Francisco Cen to masks of wood "which they had adorned with branches" (Tozzer, 1941: footnote 505). During the month Uo, the priests anointed the boards of books with "verdigris" (probably Maya blue) "so as to purify them."

More detailed information can be found in the Maya-Spanish Motul Dictionary of the Yucatec language, disclosing quite a rich vocabulary for the arts. Among other items, one finds the compound *ah chuen* as meaning “artisan, trained in some art,” surely a reference to our friend Hun Choven or One Monkey. A painter was termed *ah hobon*, deriving from *hobon*, the inks, dyes, or colors used in painting and dying. “Painter” could also be *ah dzib*, *dzib* being the root for the act of painting or drawing. *Huun* was the word for paper or book, and *cheeb* meant “pen.” There were two verbs for “to write”: *uoohtah*, derived from *uoo*, character or letter (i.e. hieroglyph), and *zabactah*, from the root *zabac*, the black ink derived from the tree known as *zabac che*, presumably the scribe’s principal medium of expression.

One must give low marks for the artist and/or scribe who prepared the Madrid Codex, for it is extraordinarily sloppy in every respect, but it does contain some interesting pictorial references to the arts in Late Postclassic Yucatan, long after Classic traditions had broken down. As recognized by Tozzer (1941: footnote 826) Madrid 95–101 show the manufacture of idols in a number of places which parallel Landa’s description. Clay masks are being worked with bone awls (Figure 43.1, a–b) and gods sculpt wooden masks with hafted axe blades (Figure 43.1, c–d). Most interesting are presentations of painting (Figure 43.2), for the divine artists hold bowls of black ink in one hand and pens in the other. What is the nature and material of the pens? They are very crudely drawn, but they seem to be at least partly flexible, and curve to a fine point on the end charged with ink. I will suggest later, on the basis of Classic evidence, that these are specially prepared feathers.

It will be remembered that Landa’s ceremonies are geared to two of the months in the 365-day Vague Year. On the contrary, all of the passages in the Madrid concern Tzolkins, or various ways of dividing up the count of 260 days, the sacred calendar. A wide variety of gods are shown as craftsmen, including most prominently Itzamná (God D), the Maize God (God E), and Chac, the Rain God (God B). I am especially pleased with a figure of the latter showing a kind of Maya computer print-out of bar-and-dot numerals emerging from his mouth (Figure 43.2, a). The sixteenth century *Relación de Valladolid* states that Itzamná was the inventor of writing and books (Tozzer, 1941: footnote 707), so that the occurrence of that god is no surprise, but it is curious that there is no reference to a monkey-like deity in the Madrid Codex.



Figure 43.1. Gods fashioning the heads of idols, from the Madrid Codex

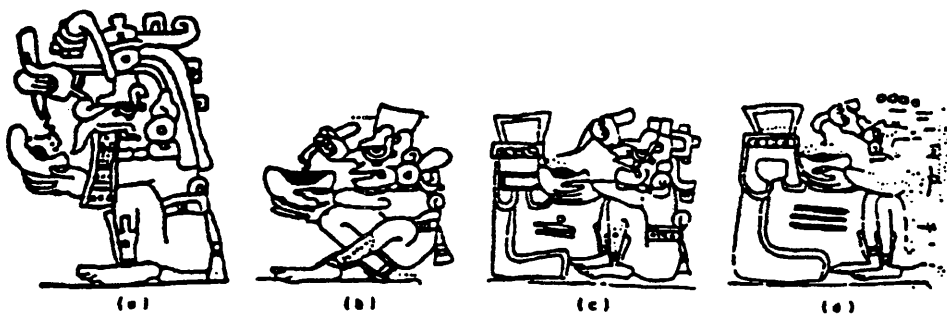


Figure 43.2. Gods with inkpots and pens, from the Madrid Codex

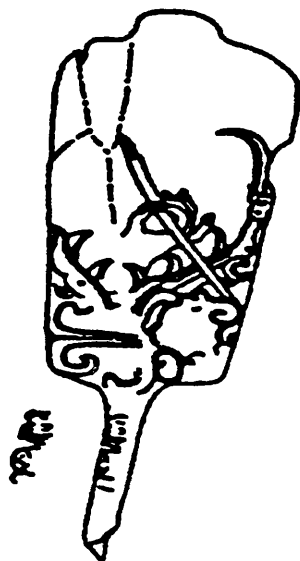


Figure 43.3. Hand with brush pen emerging from the jaws of the bearded dragon, incised bone from the tomb beneath Temple I, Tikal (Reproduced from Trik 1963)

ARTISTS AND SCRIBES DURING THE CLASSIC PERIOD

We have far richer data on artists and their supernatural patrons from the Classic Period, especially during its latter half, from about A.D. 600 to 900. The principal reason is that we have a lot more to look at, particularly the burgeoning corpus of funerary ceramics, both painted and carved, that have come to light in the last dozen years. It is these data which tell us that the supreme patrons of artists and scribes were the pair of deities already known to us by the name of One Monkey.

We might begin this survey by illustrating one of the magnificent bones from the tomb underneath Temple I at Tikal (Figure 43.3). On it, a hand emerges from the jaws of the ubiquitous Bearded Dragon, perhaps, as Thompson (1973) has suggested, an avatar of Itzamná. The hand delicately holds a slightly curved pen, in this case, surely a brush pen, the only definite representation of such an instrument in Maya art. From the Tikal bone alone, one might suggest that the concept of Itzamná as inventor, but not necessarily patron, of the arts goes back into Late Classic times.

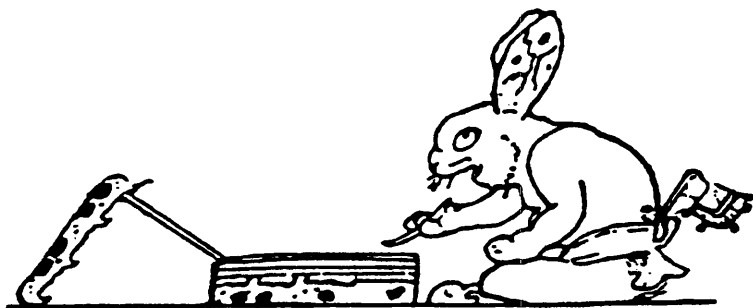


Figure 43.4. Rabbit God painting a codex, detail from Grolier 42

A far different kind of pen is held by the diminutive scribe on a stupendous vase painted in codex style (Figure 43.4), published as Grolier 42 (Coe, 1973: 90–93). This little fellow is, of course, the Rabbit God, with his typical ear markings which combine the two day signs *Lamat* (Rabbit) and *Etz'nab* (Flint). Before him is a codex, one of the thousands which must have existed in Classic times but which have disappeared forever. The book is folding screen, with the cover and the first page uplifted to show its character, and has front and back covers faced with jaguar skin. As we shall see, this “side elevation” is the conventional way to show books in Classic art. The pen is slightly curved, and is obviously not a brush pen. Not very much is known about the Rabbit God, other than the obvious observation that he must in some way be connected with the Moon, since almost all of the American Indian peoples from the western United States to South America saw a rabbit on the face of that heavenly body. A *Chamá* vase in the University Museum, Philadelphia, shows the god seated with folded arms like a lord, unfortunately destroyed through erosion, but gives us very little information on his function in Maya religious thought (Gordon and Mason, 1925–34: Pl. 53).

The standardized depiction of Maya codices enables us to say with some certainty that it is a codex which is being examined by an old, Roman-nosed god in a carved vase figured by Dieseldorff (1926–33: Pl. 32) (Figure 43.5). The cover and one page is lifted up, and the old fellow, who seems to be one of the “*Xiuhcoatl* Gods” painted on Grolier 37 (Coe, 1973: 83), points with his finger to a glyph or passage.

The conventional forms for the representation of books and pens in Late Classic pictorial ceramics having now been established, we will now examine a polychrome vase from the northern Petén or southern Campeche to follow this subject further (Figure 43.6). A young Maya ruler, with headband and death spots marking his cheek, is identified by his “god-markings” as a deity, one that is usually paired with another young “Headband God” with jaguar-skin patches in place of death spots. He is seated on a dais on the right, facing his craftsmen underlings (or perhaps equals) on the left. The topmost one is painting a mask of a young god, and has the same death spots on the cheeks, as well as an identical kilt. The lower one grasps his pen above what can only be a closed codex with jaguar-skin cover, topped by a stylized conch shell with circular opening filled with black. Suffice it to say that conclusive evidence shows this to be an ink-pot, serving

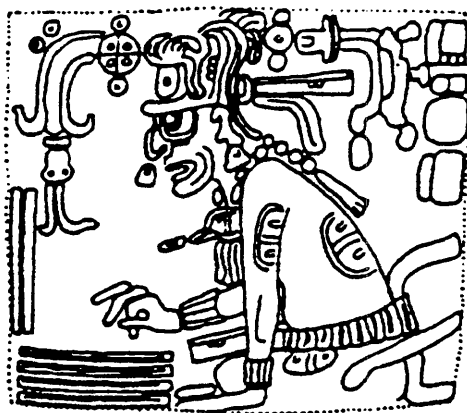


Figure 43.5. Old god reading a codex, from a carved vase from highland Guatemala

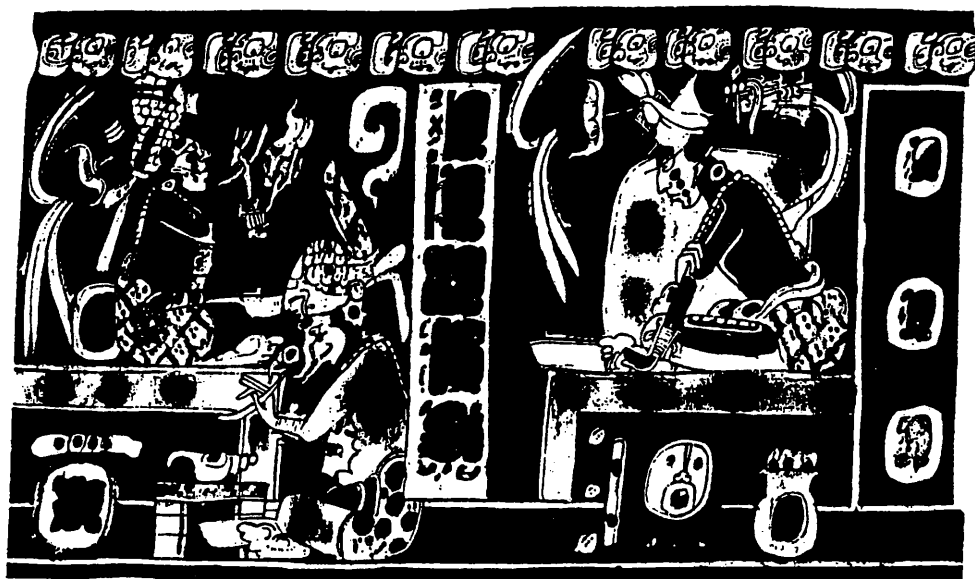


Figure 43.6. Rollout of a polychrome vase, private collection, probably from the northern Peten: two deities painting on the left; a cut conch shell inpot rests on a codex (Watercolor by Diane G. Peck)

the same function as the crude stone bowls depicted in the Madrid Codex. This cut conch will be seen to be distinctive of Maya artists and scribes in pictorial ceramics. Thus far, I have no clues to the identity of the scribe on this vase, other than to suggest that he might be the Vulture God because of the *ti*-like affix above and to the left of his beak.

It is time now to identify the brush. I am informed by Arthur Miller of an experiment performed by Felipe Dávalos G., artist for his project recording the murals of the Postclassic sites of Tancah and Tulum on the east coast of Yucatan. Dávalos was struck by the fact that in late Maya murals, the artist had been able to draw extremely long

lines without the ink running out or diminishing width of the line. A brush pen would not have this effect. By trial and error, Dávalos was able to reconstruct the Maya line with feather pens, using the feathered rather than the quill end, and established that the best of all such pens was a turkey feather. The fineness, suppleness, and elasticity of a trimmed turkey feather might well account for the “whiplash line” which is the hallmark of Maya graphic artists of the Classic Period. I feel sure that it is the feather pen which our artists carry on this fine vase.

An extraordinary plate from the central Maya area carries this theme further (Figure 43.7). The same young god, with waterlily headdress and vertical row of death spots on cheek, is seated upon a throne with Cauac markings beneath; in his right hand is the conch-shell inkpot, in his left hand the feather pen. Placed above his ear is another ear, which appears to be identical to the stylized ears shown for deer on pictorial ceramics. Standard deer ears, however, have inner markings like question marks without the period, while this ear has the T7 element infixed. It will be seen that this “extra ear” is diagnostic of scribal patrons.



Figure 43.7. Polychrome tripod plate, possibly northern Peten: various patron deities of the arts are engaged in painting and writing (Drawing by Diane G. Peck)

Around the sloping inner wall of the plate are eight figures arranged in four pairs of two each. Dividing two of the pairs from the other two are jaguar-skin bundles, surely signs of royal power, with conch-shell inkpots on top. The pair immediately above the central scene consists of two individuals with the same deerlike “extra ears,” with god-markings, and with monkey-like features superimposed on human forms. We will call these were-monkeys or monkey-men. They gesture towards what may be a codex on a stand. To the right and below the inner roundel are two identical god-pairs, performing the same task: they are painting masks with feather pens. One of the figures in each pair is a were-monkey, while the other is a Fox God, with long snout and whiskers. He and his Monkey-Man counterpart wear “extra ears” along with the crenellated, net head-dresses typical of God N. I have suggested before (Coe, 1973: 49; 1975) that the Fox Gods are subservient to God N, one of the principal lords of the Underworld. The fourth pair consists of the Young Lords, surely the Hero Twins Hunahpu and Xbalanque, one of them performing his tumbling dance in the court of the infernal gods.

The Monkey-Man Gods, in fact, turn out to be the key to the understanding of this aspect of Classic Maya culture. A fluted and carved vase from the Chochola region of Yucatan (Figure 43.8) shows a Monkey-Man in each of two cartouches, each carrying the conch-shell inkpot. Both have lolling tongues, and fierce, simian features, and both have the deerlike “extra ear.” One, whom we shall see in other appearances, has a beard and wears a visor-like headdress with fringe of long beads. The other has before his face the day glyph Chuen. I would have to infer that these two Monkey-Man Gods are our old friends Hun Batz and Hun Chouen, that is, One Monkey in his double manifestation.

Another carved Yucatecan vase (Figure 43.9) shows one Monkey-Man God holding a codex with upraised lid in his left hand, and unlike most representations, fits him with a monkey's tail. The small nose and open mouth with prominent teeth are usual for this god, as well as the deerlike “extra ear,” but in addition three spots arranged in a triangular pattern on the cheek should be noted.

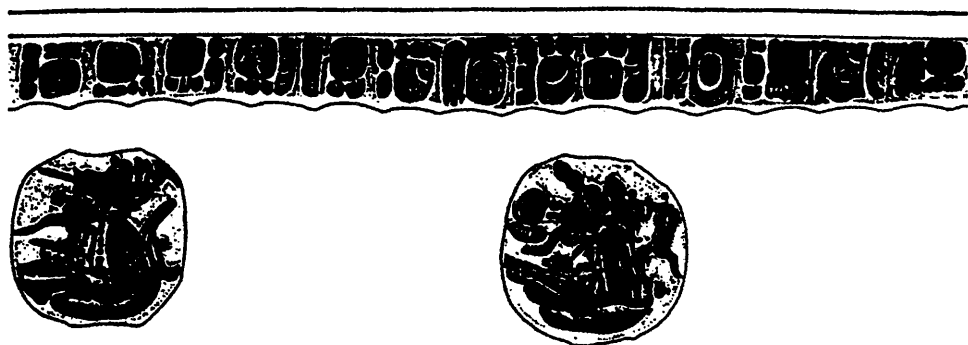


Figure 43.8. Rollout of fluted and carved vase from the Chochola area of Yucatan (Private collection): Monkey-Man Gods holding inkpots and placed in the cartouches; before the one on the right is the Chuen glyph (Drawing by Eugenia Joyce)

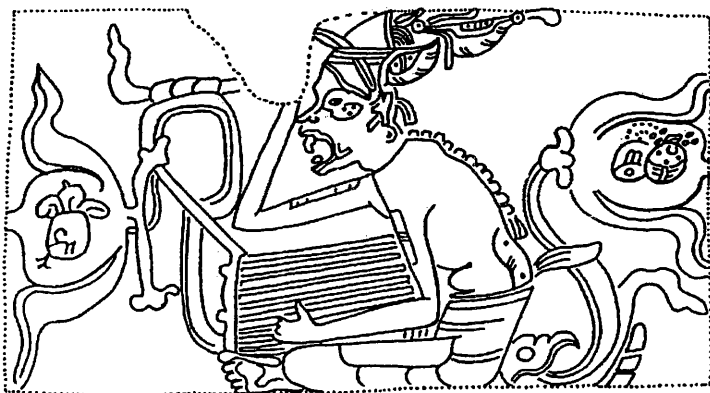


Figure 43.9. Panel from carved vase in Chochola style (Private collection): a Monkey-Man God holds a codex (Drawing by Eugenia Joyce)



Figure 43.10. Rollout of vase painted in codex style, from the northern Peten: two Monkey-Man Gods point to codices (Drawn by Diane G. Peck from photographs by Nicholas Hellmuth)

Such triple spots can also be seen on a pair of Monkey-Man Gods drawn in codex style on a fine painted vase (Figure 43.10) from the northern Peten, Guatemala. Each of these fierce creatures points to a codex in its jaguar-skin covers; is embellished with chin-whiskers; has the deerlike "extra ears"; and wears a spangled headdress like the left-hand personages in Figure 43.6. The god-markings, identical to those in the "extra-ears," identify them as supernatural beings. A beautifully delineated version of a Monkey-Man God, with most of these features, appears carrying a codex with a mask resting on top, from an extraordinary polychrome vase, also from the Peten (Figure 43.11). Just to the rear of this figure, and with one hand resting on his back, is another god bearing a conch-shell inkpot in the other hand. Both of these deities are placed in an extremely complex mythological scene the purport of which can only be guessed at.



Figure 43.11. Monkey-Man God holding a codex on which is placed a head: detail from a polychrome vase (drawn by the author from photographs by Nicholas Hellmuth)

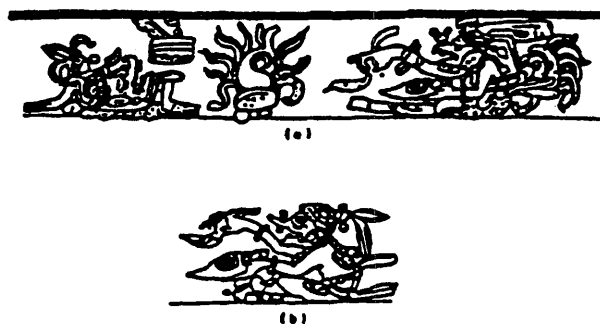


Figure 43.12. Monkey-Man Gods holding inkpots and feather brushes, details from Grolier 37

Concerning Maya pictorial ceramics, a final vase should be dealt with, the Vase of the 31 Gods or Grolier 37 (Coe, 1973: 81–83). When I first examined and described this remarkable vessel, with its gods arranged in conversational scenes within four superimposed horizontal bands, I could only surmise the identity of certain deities and the objects which they were holding. Now, thanks to the examination of hundreds of other pictorial vases, I have a clearer idea of some of them. The god shown here as Figure 43.12, a is definitely one of the fierce Monkey-Man Gods, holding a curved, feather pen and a conch-shell inkpot; before him is a fire and, beyond that, a codex with jaguar-skin covers and a severed head, probably that of his simian companion. The latter, Figure 43.12, b, also has pen and inkpot in hand. On all three heads can be seen the visor-like headdress of long beads.

This Monkey-Man deity (or, more properly, this pair of deities), whom I identify as One Monkey, plays a role in Maya art beyond funerary ceramics. For instance, in the



Figure 43.13. Head variants of the *kin* glyph



Figure 43.14. Full-figure variant for *kin* on Lintel 48, Yaxchilan
(After Thompson 1950, Fig. 29, 10)



Figure 43.15. 0 *kins*, full-figure variant on Stela D, Copan

Initial Series of Classic Maya inscriptions, beginning with the Leyden Plate, the *kin* or single day position has at its head or full-figure substitute a fierce-faced, animal-like deity (Figure 43.13) which Thompson (1950: 143) would like to identify as a dog or jaguar, with dog more likely, although he does identify the creature on the Leyden Plate (Figure 43.13, a) and on Lintel 48 at Yaxchilan (Figure 43.14) as a monkey.

In fact, Thompson enlarges upon his monkey identification by commenting upon the mythological connections between the monkey and the sun (i.e. *kin*), and suggests that such an animal was used because the Aztec god Xochipilli was not only an aspect of the sun, but one of his guises was that of a monkey in his role as patron of the day Ozomatli (Monkey).

I feel that he did not go far enough. I am sure that *all* personified forms of the *kin* period glyph which are not obviously the Sun God are the Monkey-Man God, often with the visor-like cap seen in Classic vases. Most striking are the full-figure forms, such as Copan Stela D (Figure 43.15) and the Palace Tablet at Palenque (Figure 43.16), where there can be no question about this being the Monkey-Man, complete with deer-like “extra ear.” The “extra ear” is also worn by the very monkey-like creature substituting for the *kin* glyph on Yaxchilan Lintel 48, as well as the personified number head which he carries.



Figure 43.16. Full-figure variant for *kin* on the Tablet of the Slaves, Palenque



Figure 43.17. Monkey-Man God as morning star spearing a victim, from Dresden 48b

The Monkey-Man God may also have been involved with the Maya Venus cult. Although written in the Early Postclassic, the Dresden Codex is generally considered to be a compilation of Classic textual and pictorial material. Each of the five pages of the Dresden Venus Table has a picture of a spearer, a personification of that planet in its heliacal rising, dispatching a victim with darts who is shown in the lower part of that page. The identification of the third spearer (Figure 43.17) has long puzzled scholars. Seler (1963: 251) called him an “animal-headed god” with “savage, bestial features,” and would have liked to identify him with the Venus regent of the east on page 25 of the Borgia Codex, which deals with the same sort of material. However, the latter, with snake and flint knives emerging from mouth, looks nothing like the god of Dresden 48b, whom Seler admitted he was unable to find elsewhere in the Maya manuscripts.

Thompson (1972a: 68) identified the Venus god of pages 48 as “an anthropomorphized jaguar or perhaps puma,” although such felines appear frequently in the manuscripts, ceramics, and monuments and look nothing like this. He was inclined to identify him with the Aztec Yoaltecutli, “Lord of the Night,” on the basis of the jaguar-skin kilt which the spearer wears, and from the spots on the lower right of his associated glyph, which Thompson, on very shaky grounds, suggests might be the Mamal-huaztli constellation with which Yoaltecutli was said to be associated.

I suggest, that this is, instead, Monkey-Man or One Monkey. His face is identical to that of our Monkey-Man Gods on ceramics and in inscriptions. He has the deer-like “extra ear” above his own. And he has the same jaguar-skin kilt as the Monkey-Man God on Grolier 37 (Figure 43.12, a). Even more significant is the ornament worn over his chest. This is the pierced oval shell, pointed at one end, known as the *oyohualli* in Aztec iconography, so identified on a cloth mantle depicted in the Codex Magliabecchiano. In central Mexican iconography, the *oyohualli* has one basic context, as the principal adornment of gods of dance and pleasure, especially those which can have monkey avatars, such as Xochipilli. It is no accident that the dancing monkey associated with the day Ozomatli or Monkey on Borgia 13 wears *oyohualli* ear pendants. I think that the evidence is strong that the Maya One Monkey was also a Venus Regent, and probably played an even more important part in Maya religion than our scanty data suggest.

CONCLUSIONS

Classic Maya scribes and artists used feather pens and perhaps brush pens, and they are shown painting masks and writing in folding-screen books with covers of jaguar-skin. Ink and perhaps other pigments were held in conch-shell containers. The profession was probably one of high status, for according to Miles (1957: 768), among the Pokomam Maya of Guatemala, only those of the upper caste could become painters and writers.

There were various patrons of these craftsmen in Classic and Postclassic times, and there is support for the view that Itzamná, the Maya supreme deity, was considered to have invented writing and books. But overall supernatural responsibility must have been assigned to One Monkey, a creature combining simian with human features. The non-human element in the combination appears most often to be the Howler Monkey (*Alouatta palliata* according to Leopold 1959, although Hall and Kelson, 1959 give the scientific name as *Alouatta villosa*). The flat face, prominent teeth, and male beard of the Howler, known throughout the Maya area as *batz'* or *baatz'*, are unmistakable in some representations. However, the full figure glyph on Stela 48 at Yaxchilan must be a Spider Monkey (*Ateles geoffroyi*), and in manuscripts the Mexican day sign Ozomatli usually shows the characteristic ruff of hair on the top of the head and the goggle-like eyes of that animal; the two monkeys might in some way have been interchangeable, although the Howler predominates.

To us, with our background in the Classical Mediterranean world, it seems strange that arts traditionally placed under the patronage of Apollo, the Muses, and Hephaestus should be relegated in the Mesoamerican thought system to were-monkeys. Monkeys are more highly thought of in the cultures of the Hindu-Buddhist world, where, for instance, Hanuman and his monkey-man army play a great part in the epic of Ramayana. My colleague Floyd Lounsbury tells me that the affinity between man and our simian relatives is recognized by the Yucatec Maya in that the numerical classifier *tul* is used for both human beings and monkeys. Not many years ago, I was traveling on horseback with some Veracruz friends across a savannah interspersed with forest. In one of these wooded patches, against my wishes, one of our party shot an old Howler Monkey,

complete with goatee and savage teeth. This was later skinned and butchered in our camp. The consensus of the bystanders watching the grisly process was that this was truly a *cristiano* (human being). The close relation between mankind and the intelligent and excitable non-human primates must have led to their selection as the most clever creatures of the natural world.

“The *Way* Glyph: Evidence for ‘Co-essences’ among the Classic Maya”

Stephen Houston and David Stuart

Fuller biographical treatments of Houston and Stuart appear in Michael Coe's book on decipherment (1992). The present article questions an earlier plausible reading through the close study of syllabic affixation on a logographic base. It then adopts the perspective of Coe and, earlier still, Seler, by comparing the results with a broad range of ethnographic and historical data. This confirms the generally accepted view that “companion spirits” were important, even central to Classic Maya religion. Nonetheless, much is left undeveloped in this preliminary article, and independent efforts by Grube and Nahm (1994) add considerably to the list of companion spirits. The essay is noteworthy in another way. It presents a reading independently discovered by Nikolai Grube in Germany. Coe in particular develops the point that shared methods and assumptions lead to similar results, in part testing the validity of the “new synthesis” (but see our introduction). Still controversial are the implications of the decipherment and whether Maya rulers can be understood as “shaman kings” (Freidel and Schele 1988).

“[R]eversal or association between humans and animals recalls what appear to be zoomorphic expressions in ancient Maya art . . .” (Bruce 1979: 70)

Among the most widespread of Mesoamerican concepts is that of a “companion spirit,” a supernatural being with whom a person shares his or her consciousness (Foster 1944; Monaghan n.d.; Stratmeyer & Stratmeyer 1977: 133; Villa Rojas 1947: 583). According to ethnographic reports, groups as far apart as the Huichol in Mexico and the Maya of Central America believe in such spirits (Foster 1944: 100; La Farge 1947; Saler 1964). What is puzzling, however, is why the concept of a “companion” has had so little impact on

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interpretations of Precolumbian iconography and religion (see Bruce 1979: 70–73; Furst 1973). In this paper, we make two points: first, that Maya hieroglyphs and art do indeed document the notion of a companion spirit as far back as the Classic Period; and second, that these beings appear to have been central to much of Classic Maya art and religion.

ETHNOGRAPHIC BACKGROUND

Companion spirits have long been of interest to anthropologists. In the 19th century, both Brasseur de Bourbourg and Brinton wrote at length on the subject, with Brinton voicing the more widely cited view that “guardian spirits” (his term for companion spirits) were the vestiges of a “secret organization” dedicated to the “annihilation of the government and religion which [whites] had introduced” (Brinton 1894: 69). Although few scholars believe this today, Brinton did provide the foundation for all later research on the subject.

Of more recent studies, Foster’s work on companion spirits in Mesoamerica is perhaps the most influential (Foster 1944). Foster’s contribution was to distinguish between two beings: a spirit companion and a transforming witch. The former, the *tonal*, was linked to people by fate or fortune, usually according to a person’s date of birth; the qualities of the *tonal*, which might be an animal or bird, were reflected in the character and personality of its “owner” (Foster 1944: 103). The witch, or *nagual*, was far more sinister: By night it took the form of an aggressive and feared animal, which strove to injure and kill its victims. Both terms were, of course, Nahuatl in origin (Andrews 1975: 455, 474). More recent studies have tended to accept Foster’s distinction (Holland 1961: 168–172; Kaplan 1956: 363), although some have not (Wagley 1949: 65).

In our opinion, the most useful label for companion spirits is neither *tonal* nor *nagual*, but “co-essence,” a term introduced by Monaghan (n.d.). A co-essence is “an animal or celestial phenomenon (e.g., rain, lightning, wind) that is believed to share in the consciousness of the person who ‘owns’ it” (Monaghan n.d.). The linkage is so close that when the co-essence is wounded or destroyed, the owner grows ill or dies (Thompson 1958b: 273–277). As a label, “co-essence” is relatively close to the sense of *tonal*, although it is preferable to other terms in that it avoids the pitfalls of using Nahuatl terms for Maya concepts (Saler 1964: 306) and steers away from ideas of “witchcraft” and “werewolfism,” which are of doubtful relevance to many parts of the Maya region (Correa 1955: 81; La Farge 1947: 151; Saler 1964: 306; Wisdom 1952: 122).

Co-essences take many forms in the Maya area. Some are reptiles, rain, dwarfs, balls of fire, comets, inanimate objects, or rainbows; others appear as huge bucks, birds, flying jaguars, or peculiar composite creatures (Foster 1944: 87; Wagley 1949: 65–66). Most behave in odd ways or show unusual features—great ugliness or bloodshot eyes are thought to be sure marks of a co-essence (Saler 1964: 313). For much of the time they are incorporeal and lie deeply embedded “in the heart” (Villa Rojas 1947: 584). Yet when a person is asleep his co-essence roams. It is probably for this very reason that a broadly distributed term for co-essence builds upon the root “sleep” or “dream” (see below). Bruce in particular (1979: 23–24) shows that Lacandon co-essences, the *oneno’*, manifest themselves to their owners in dreams.¹

Co-essences have two other interesting features: Humans are not the only entities who have them, and many people have more than one. Historical accounts suggest that the deities of the Quiché Maya possess co-essences (Foster 1944: 87), and that some villagers regard saints, such as St. James the Apostle, as their spirit companions (Saler 1964: 310). Nor are the spirits limited in number: According to several sources, individuals and gods may have more than one co-essence, particularly if the owner is powerful or spiritually knowledgeable (Foster 1944: 88; Stratmeyer & Stratmeyer 1977: 130, 139). Yet, as among the Mam, “(m)ost people go through life knowing that they have a *nagual* (co-essence), but never knowing what it is” (Wagley 1949: 65). Such knowledge is often restricted to the ritual and calendrical specialists of traditional Maya society.

The notion of co-essences, however interesting from a psychological perspective, never found a sympathetic audience among the secular and ecclesiastical authorities of colonial Guatemala and Mexico. The masked dances that apparently represented co-essences—the *nawal* of Yucatán (cognate with *nagual*?) and the *tum teleche* of highland Guatemala—soon came to be seen as heretical and deviant practices (Bricker 1981a: 148; Chinchilla Aguilar 1953: 290–291). Within a few centuries of the conquest spirit companions had joined the witches, demons, and lycanthropes of the Spanish Colonial imagination.

CO-ESSENCES IN THE CLASSIC PERIOD

At the beginning of this paper we asked an important question: Do co-essences, so widespread in the belief system of the living Maya, appear in Classic Maya art and writing? We now believe that a relatively common hieroglyph, T539 (or T572 in the codical form deciphered by Bricker [1986b: 90–91]), is the sign for co-essence, and that its reading is **way** (Figure 44.1,a–c).

A number of scholars have studied T539 with varying success. Kelley (1962c: Pl. 14) identified the sign as a reference to the equinox, while both Adams (1977: 415) and Quirarte (1979: 137) preferred to see it as a title for lords of a jaguar lineage. Neither interpretation is convincing since the authors fail to base their arguments on phonetic decipherments or to explain precisely how their identifications elucidate the contexts in which T539 appears.

So far, the only epigrapher to propose a phonetic decipherment is Linda Schele, who reads the sign *balan-ahau/balam ahau*, “hidden lord” or “jaguar lord” (Schele 1985a; 1988: 298). Schele’s interpretation is attractive, for it at once takes account of the glyph’s components—an “ahau” face and the pelt of a jaguar (*balam* or *balan* in Mayan languages)—as well as substitution patterns in the inscriptions of Palenque and Tikal. It also helps explain the contexts of T539. According to Schele, the glyph identifies dozens of underworld creatures who dance in scenes on Classic Maya vases. The figures on the famed vase from Altar de Sacrificios (Figure 44.2) are perhaps the best known examples of such beings. Can these images represent, as Schele suggests, the “hidden lords” or royal dead in the underworld? At the very least, Schele makes a good case that such figures are supernatural, a possibility overlooked by most other authors (Schele 1988: 298).

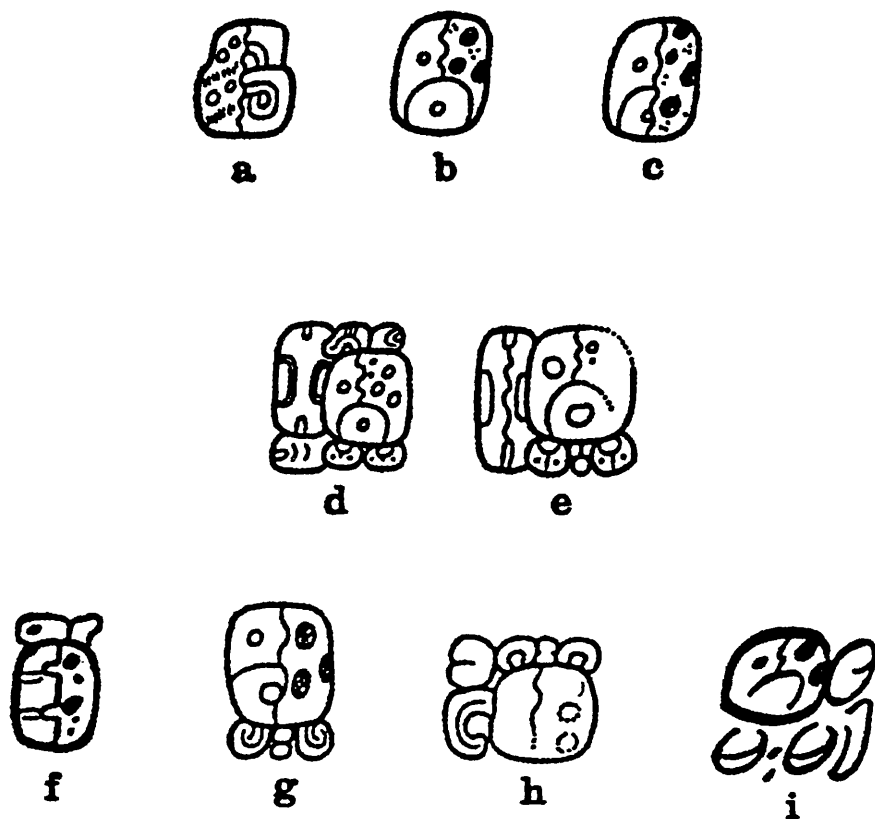


Figure 44.1. The *way* glyph and its phonetic complements

Nevertheless, we feel that Schele's reading is incorrect, and that dead lords are not the main characters on these vessels.² Our evidence is primarily epigraphic. In most cases, the affixes attached to T539 or T572 are the phonetic signs **wa** and **ya** (see D. Stuart 1987b: 46–47 for a syllabic chart). Typically, **wa** appears before T539; **ya**, after it. At Palenque, a glyphic compound that incorporates T539 shows that the **wa** prefix is entirely optional (Figure 44.1, d, e). In a few instances, **wa** and **ya** are found together—**wa-ya**/T539 or T539/**wa-ya** or they do not occur at all (Figure 44.1, f–i). In our opinion, the most obvious explanation for such spellings is that the phonetic signs, which spell *way*, trumpet the reading of the glyph they are attached to. Accordingly, we propose that T539 is a logograph with the reading **WAY**. The affixes are simply functioning as phonetic complements.

To be convincing, however, the reading must explain the contexts noted and studied by Schele. In these cases, T539 with phonetic complements and prefixed *u* occurs in captions that refer to the supernatural figures and relate them to certain historical personages, each denoted by an Emblem Glyph or place name. Thus, the supernatural is the “T539” of such-and-such a person. Here, the *way* reading has to explain the relationship between the supernatural and historical figures.

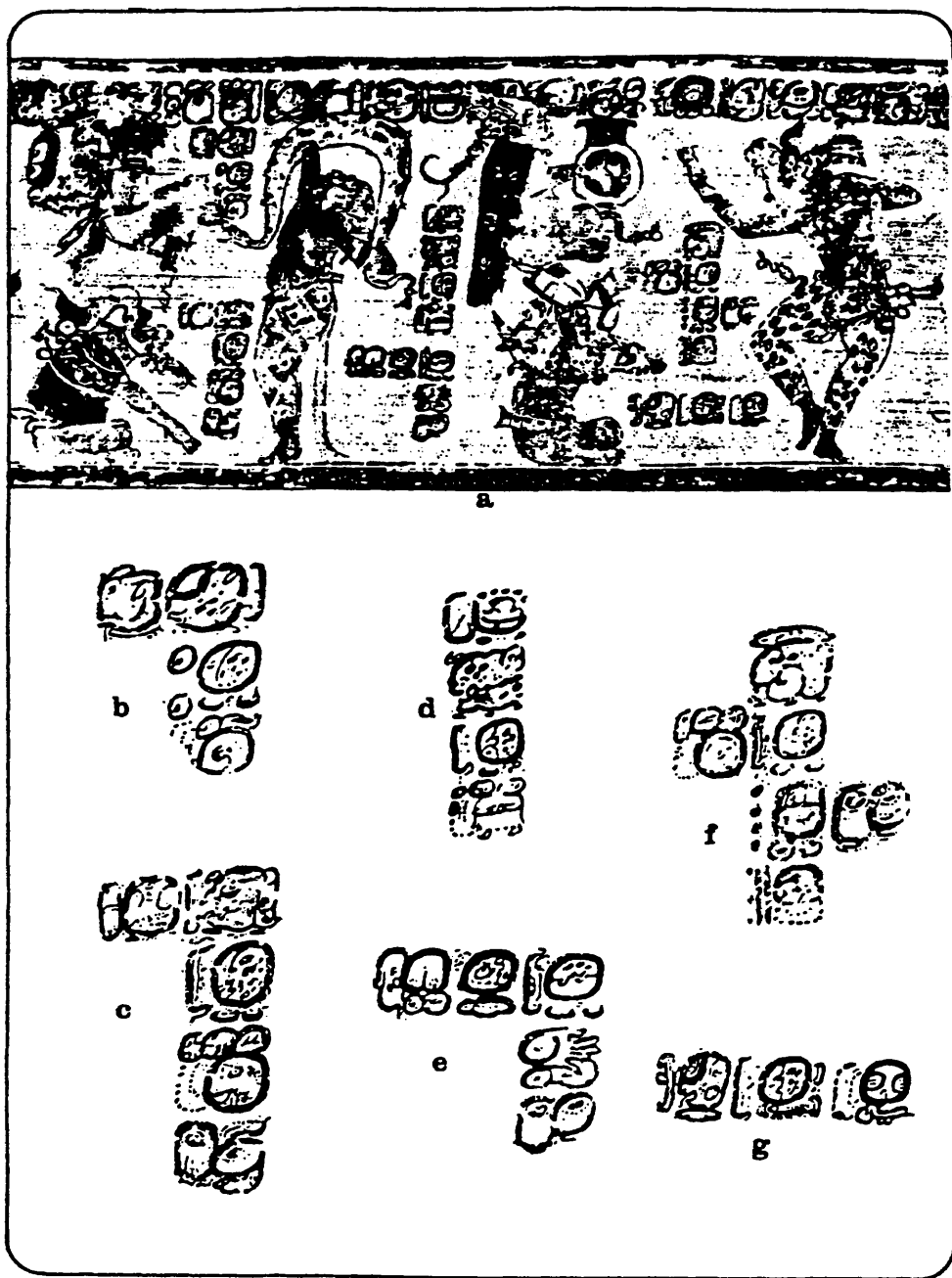


Figure 44.2. A painted vase from Burial 96, Altar de Sacrificios, Guatemala

We believe that it does so. The following dictionary entries—far from exhaustive—support our hypothesis:

YUCATEC	<i>way</i>	"transfigurar por encantamiento" ¹
	<i>vaay</i>	"familiar que tienen los nigrománticos, bruxos, o hechizeros, que es algún animal . . ." ²
	<i>vayazba</i>	"soñar" ²
	<i>wayak'</i>	"visión entre sueños" ¹
	<i>vayak</i>	"pronóstico, o palabra o de adivinos, o de sueños" ²
LACANDON	<i>äh-way</i>	"wizard" ³
	<i>way-äl</i>	"metamorphose" ³
PROTO-CHOLAN	<i>*way</i>	"dormir" ⁴
	<i>*wayak'</i>	"sueño" ⁴
CHOL	<i>wäy</i>	"other spirit" ⁵
	<i>wäyäl</i>	"sleep" ⁵
	<i>wäyibäl</i>	"sleeping place" ⁵
COLONIAL TZOTZIL	<i>vay</i>	"sleep, take lodging" ⁶
	<i>vayajel</i>	"witch craft" ⁶
	<i>vayichin</i>	"dream" ⁶
	<i>vayajom</i>	"brujo, nigromántico" ⁶
TZOTZIL	<i>vayihel</i>	"animal transformation of witch, animal companion spirit of witch" ⁷
	<i>vayihin</i>	"send animal transformation or animal companion spirit (witch)" ⁷
TOJOLABAL	<i>wayi</i>	"dormir" ⁸
	<i>wayhel</i>	"nagual" ⁸
	<i>wayjelan</i>	"hechizar" ⁸
	<i>wayjelani</i>	"brujear" ⁸

¹ Barrera Vásquez 1980: 916

² Martínez Hernández 1929: 888, 889

³ Bruce 1979: 15

⁴ Kaufman & Norman 1984: 135

⁵ Whittaker & Warkentin 1965: 114

⁶ Laughlin 1988: 326, 327

⁷ Laughlin 1975: 365

⁸ Lenkersdorf 1979: 107, 252, 347, 486

Note: The orthographies and misspellings of the dictionary sources have been retained.

Uniformly, the root is “sleep,” with various semantic and grammatical extensions, including “dream,” “witchcraft,” “nagual,” “animal transformation,” and, most important of all, “other spirit,” or co-essence, as in the Chol phrase, *kome xiba abi i wäy jini x’ixik*, “because [the] devil was the other spirit of the woman” (Whittaker & Warkentin 1965: 114). In several glosses, such as those from the Motul dictionary of Colonial Yucatec, the terms have obviously been influenced by Spanish preconceptions. For example, *vaay* is described as an animal *que, por pacto que hazen con el demonio se convierten fantásticamente* [an animal that, through a pact made with the devil, is fantastically transformed]—an idea with clear antecedents in European belief (Martínez Hernández 1929: 888). Following Monaghan, we believe the notion of transformation or metamorphosis to be secondary to the definition and perception of self-identity.

How, then, do the terms explain T5397? First, *way*, or “co-essence,” is acceptable in terms of the affixes **wa** and **ya**. Second, the expression **u-WAY**, or “his/her/its co-essence,” neatly explains the relationships stated on the Altar vase between the supernatural creatures and the historical figures to whom they pertain. A particularly clear example shows that a “water-jaguar” is the *way* of a Seibal lord (Figure 44.3).³ Moreover, the behavior of such creatures is in accordance with Maya concepts of the co-essence: the supernaturals cavort as though dancing in the *tum teleche* (Karl Taube, personal communication, 1989); they behave and look as animals do not; and they tend to appear as composites of various creatures, including deer and monkeys, or snakes and deer. Thus, the “gods,” “deities,” “dead lords,” and “underworld denizens” thought to occur on some Maya vessels are Classic Period expressions of co-essences. It is not at all clear that they are associated with mortuary rituals or underworld dances (see Schele 1989: 146).⁴

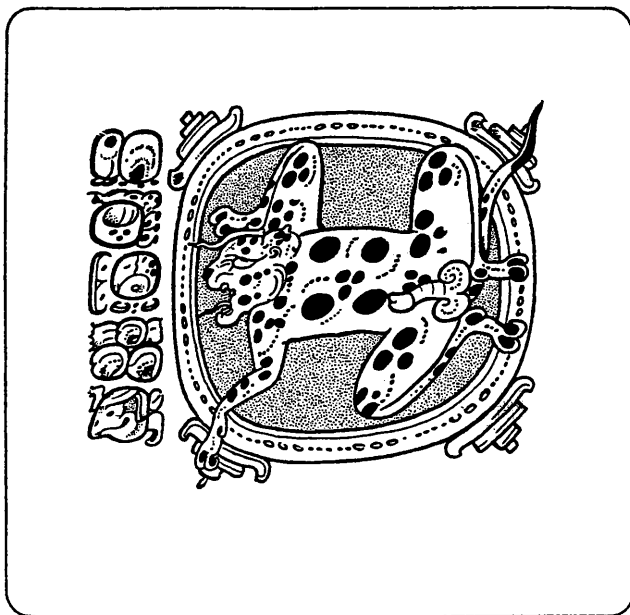


Figure 44.3. “Watery jaguar” as the *way* of the lord of Seibal

The *way* glyph may also throw some light on the nature of the so-called “vision serpents” studied by Schele and Miller (1986: 177). They presume these creatures to be “hallucinatory visions . . . symbolized by a rearing snake” that materializes after blood-letting rituals (Schele 1989: 146–148; Schele & Miller 1986: 46–47, 177). On Yaxchilan Lintel 14, a serpent known as *kaanal chak bay kan* is named as the *way* of “Lady Chak-Skull” (Figure 44.4). The serpent passes through or around her body, as it does on a companion monument, Lintel 13. Lintel 13 is noteworthy for its reference to the birth of Lady Chak-Skull’s son, who may be represented by the human face emerging from the mouth of her *way* (Figure 44.5). Can this scene represent an elaborate visual metaphor for birth?

On a related matter, we have found evidence that another serpent was regarded as the *way* of *K’awil*, or God K, an important deity of the Maya (Figure 44.6). In one text, the serpent is named both as *na kan* or *na chan*, and as the *way* of God K (Figure 44.6, a).⁵ In two other examples, from Palenque Temple XIV, the name shifts to *sak bak na kan*,

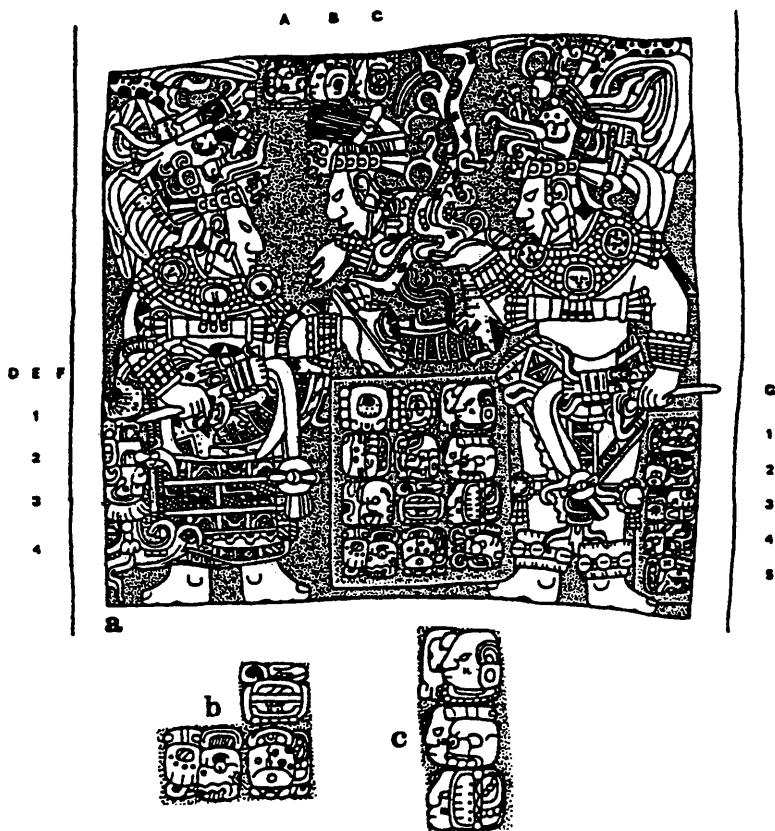


Figure 44.4. The serpent *way* of “Lady Chak-Skull” of Yaxchilan

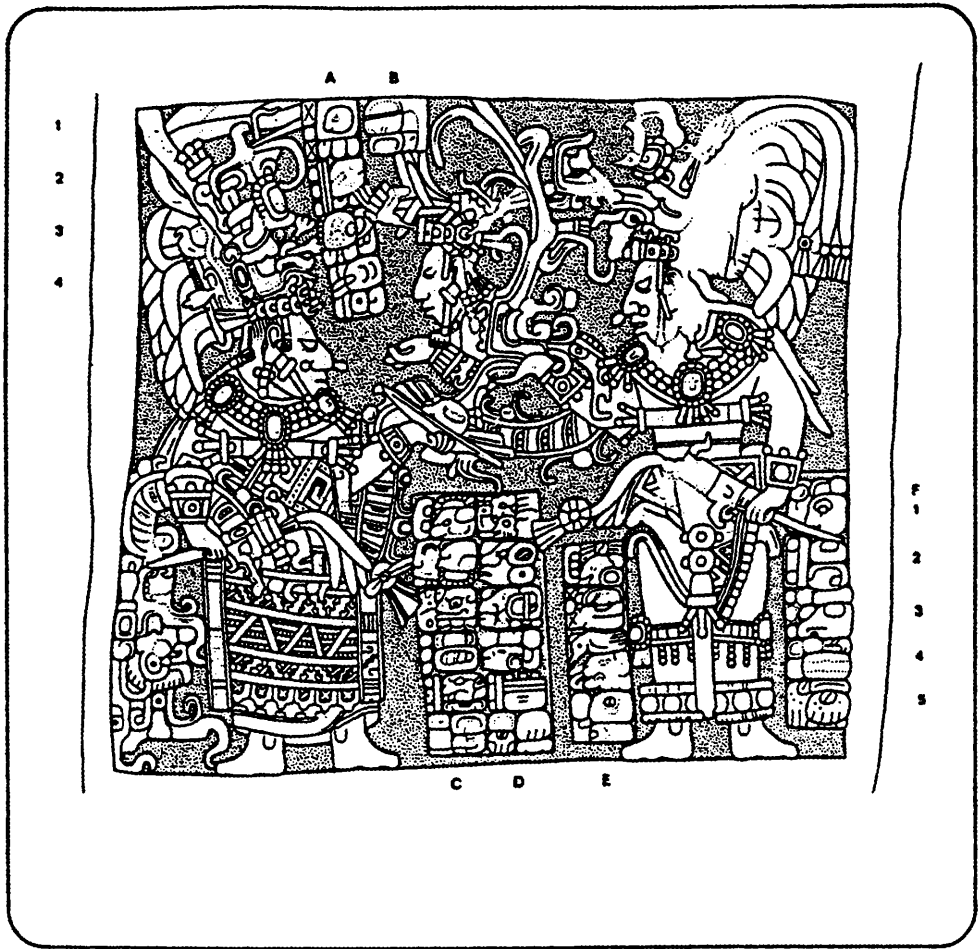


Figure 44.5. The serpent way of “Lady Chak-Skull” in a possible “birth” image

“white bone *na kan*.” Yet there is a difference: the snake head has been stripped of its flesh, creating a strong resemblance to some two-headed serpent bars (Figure 44.6, b, c, d). Conceivably, when lords held such bars they were thought to grasp or to possess the way of God K.⁶ Of course, the fact that gods have co-essences is hardly surprising, given the information presented above.⁷

Data from Copán raise another point about the serpent. We suspect that in some instances what concerned the Maya was not the snake, but God K’s leg, which often ends in a reptilian head. On the East Door, South Jamb of Copán Temple 11, an inscription implies that *y-ok*, “his foot,” is the way of God K (Figure 44.6, d). This reference explains scenes on Classic Maya pottery that display large, coiled serpents attached to God K’s foot. In these images, the Maya have apparently juxtaposed a deity and its co-essence. In some examples, the God K image is diminutive or absent altogether, perhaps indicating that some isolated serpent images in Maya art are to be understood as God K’s foot.

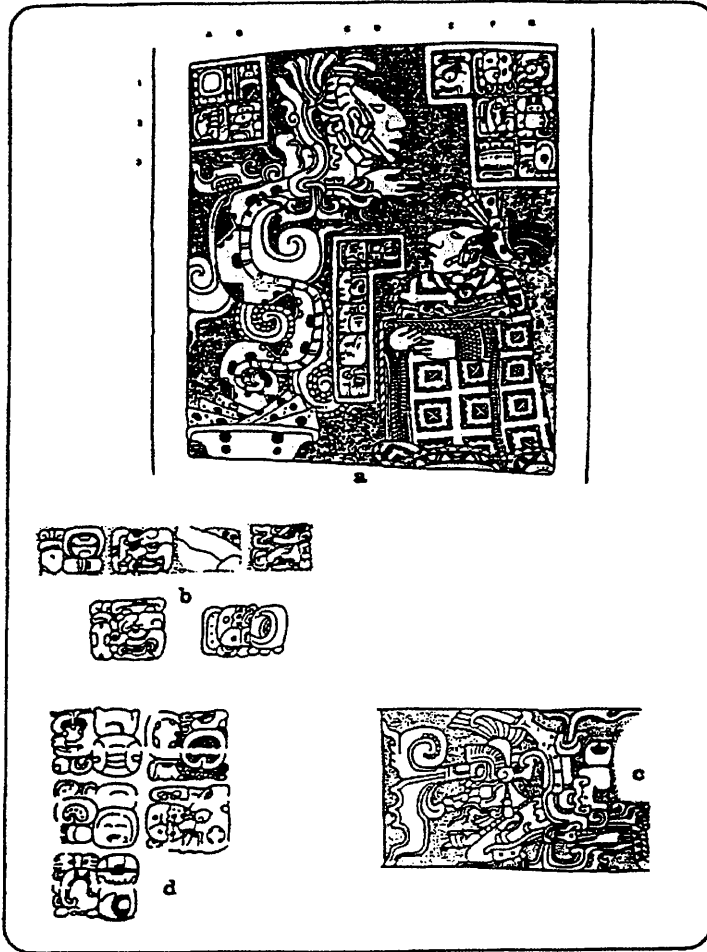


Figure 44.6. The serpent way of God K

Rarely, T539 contains a quincunx sign, read **bi**. When this sign appears, the reading of T539 almost certainly changes from **WAY** to **WAYAB**. This combination forms part of three names found in texts from the Usumacinta region (Figure 44.7). In the first name, the full reading is: **KAN-ch'o-ko/wa-WAY-bi/xo-ki** (Figure 44.7, a), or **KAN-na-ch'o-k'o/wa-ya-WAY-bi/?/xo-ki** (Figure 44.7, b). We would read his name as *Kan Ch'ok Wayab Xok*. The *wayab xok* portion of this name also appears as part of the name *Chak Wayab Xok* in the Books of Chilam Balam (e.g., Edmonson 1982: 74). In two other names (Figure 44.7, c, d), one of a captive and the other of a local ruler from El Cayo, we again see the combination *ch'ok wayab*.

Way or *wayab* also appears in a name of a deity mentioned twice in the inscriptions of Palenque (Figure 44.8, a, b). Here, **WAY**, with a **bi** infix in one example, is preceded by the sign for "black" (**IK'** or **EK'**). Together this precedes the head of God B, Chaak, suggesting a reading *Ek' Wayab Chaak*. This makes sense in light of the color-direction

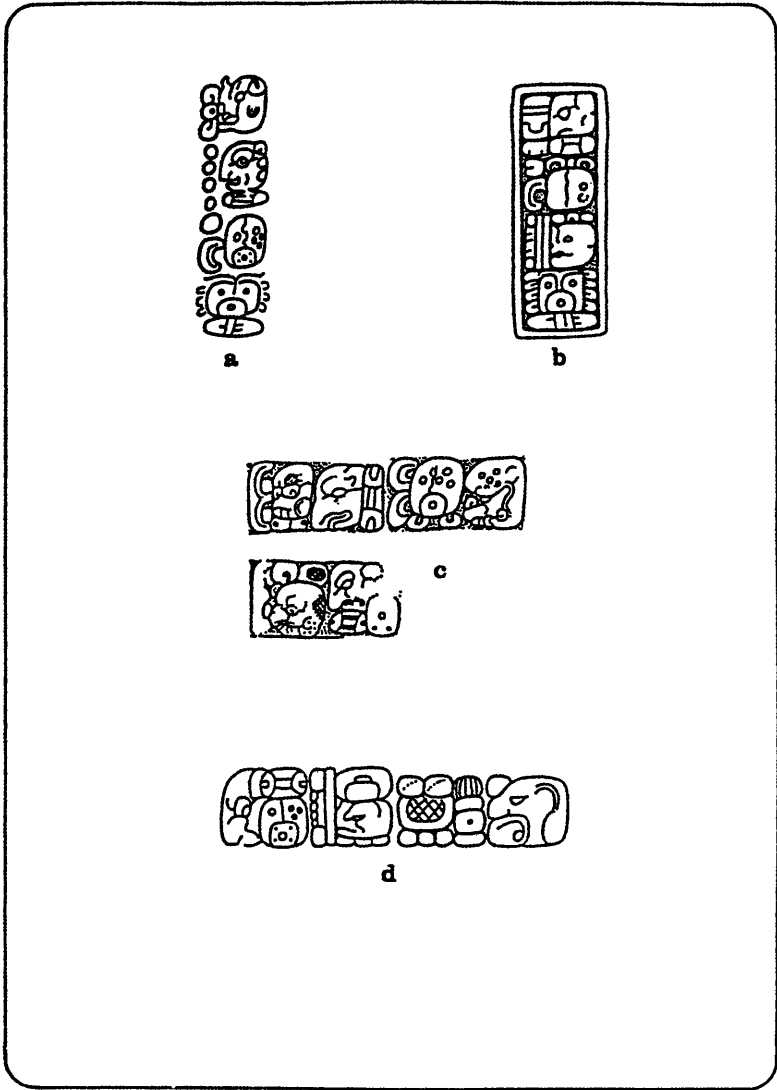


Figure 44.7. The *way* glyph in *ch'ok wayab* names

symbolism of both the Chaaks and the so-called *uayeyab* entities known from Yucatán (Tozzer 1941: 137).

When **li** is added to the combination **way-bi**, the result is probably *wayabil* or *waybil*. In most examples, this refers to a kind of structure (Figure 44.9). In Colonial Tzotzil, the similar form *vayebal* means “bed,” “dormitory, hostel,” or any sleeping place or article for sleeping (Laughlin 1988, 1: 326). The Temple of the Inscriptions at Tikal seems to be one such structure, and additional references of the same kind are known from unprovenienced wall panels. Our present hunch is that the structures served either as “sleeping places” (based on the meaning of the root *way*), or possibly as locations where



a



b

Figure 44.8. Ek' Wayab Chaak, a Palenque deity



a



b



c

Figure 44.9. The *way* glyph in *waybil*, an architectural reference

co-essences dwelt or manifested themselves. This speculation may elucidate the use of T589 in a posthumous reference to “Shield Jaguar” of Yaxchilan (Figure 44.10). Did the Maya simply believe that Shield Jaguar was “asleep” at the time? The suggestion that the Maya linked sleep with death is less farfetched when we consider that in at least one context, the **WAY** glyph alternates with the well-known “percentage sign” associated with death (Figure 44.11).

CONCLUSIONS

In our judgement, the *way* decipherment fundamentally changes our understanding of Classic Maya iconography and belief. It indicates that many of the supernatural

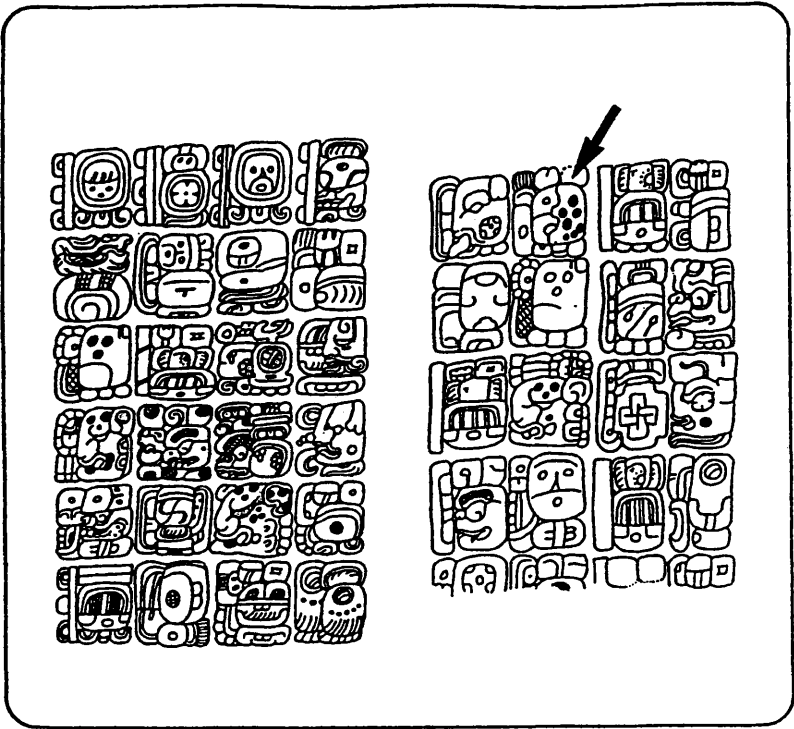


Figure 44.10. *Way* in a posthumous reference to Lord “Shield-Jaguar” of Yaxchilan

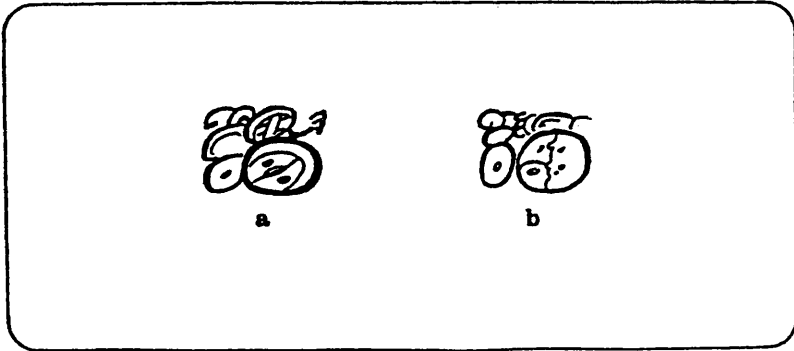


Figure 44.11. Substitution between *way* and the “percentage sign”

figures, once described as “gods,” “underworld denizens,” or “deities,” are instead co-essences of supernaturals or humans. More than ever, then, Classic Maya beliefs would seem to coincide with general patterns of Mesoamerican thought. We are also convinced that the reading undermines the “mortuary” or “underworld” hypothesis of Maya vase painting. Elsewhere we have shown that pottery texts, once held to be descriptions of

the heroic conquest of death, record more mundane matters, such as vessel types and beverages (see Houston, Stuart, & Taube 1989). It appears now that much of the imagery on ceramics relates to Maya perceptions of self. As a result, death and the afterlife can no longer be regarded as the dominant themes of Maya pottery art. Our final point concerns the certainty with which Maya lords identified their co-essences. Today, this skill is restricted to the more powerful and well-educated members of traditional Maya society (Villa Rojas 1947: 583). For the Classic Maya, such self-knowledge may well have been an important marker of elite status.

ACKNOWLEDGMENTS

This manuscript has been greatly improved by discussions with our friend and Vanderbilt University colleague John Monaghan. We are also grateful to Michael D. Coe and Linda Schele for their gracious words of encouragement, although we alone are responsible for the ideas presented here. It is heartening that Nikolai Grube has arrived independently at some of the same conclusions presented above. Finally, our thanks go to Duncan Earle and Karl Taube for their astute comments on our report.

NOTES

1. We hasten to add, however, that the Lacandon *onen*, which passes through the patri-line, is quite distinct from the more idiosyncratic notions of co-essences that are documented among other Maya groups (Bruce 1979: 20–22). Consequently, Lacandon beliefs may be aberrant.

2. In all probability, the view that Maya pottery texts and images are funerary in intent stems from Coe's original contention that Maya vases record a kind of native American "Book of the Dead" (M. Coe 1973: 22, 1978: 11–14). Until recently this interpretation dominated all discussions of pottery art and writing (see Schele and Miller 1986: 266).

3. The "water-jaguar," here illustrated from Kerr 771, also appears on Kerr 791, a vase whose style is virtually identical to that of the Altar vase. Again, he is called the *way* of the Seibal lord.

4. It is important to note that T539 is an appropriate icon for *way*. In Late Classic examples the sign consists of a face that is partly covered by feline pelage. Presumably, the face represents a human and the pelage a co-essence, with each depicted as part of an integral whole. In addition, we suspect that the few places in which T539 alternates with a jaguar pillow, T609a, may reflect a word in Yucatec Maya: *way*, "retrere o retrainamiento donde uno duerme" (Barrera Vásquez 1980: 915).

5. The serpent is probably similar to the one depicted on Tikal Temple IV, Lintel 3, and named at F8 in the text of the sculpture (Jones & Satterthwaite 1982: Figure 74).

6. Schele suggests (personal communication, 1989) that the so-called "fish-in-hand" glyph (T714) may well be a glyph for "materialization" rather than "bloodletting," as Proskouriakoff (1973: 172) proposed (see Ringle 1988: 16 for a similar line of reasoning).

7. Karl Taube speculates that this will prove to be a common pattern; in his opinion, the Principal Bird Deity is likely to be the *way* of God D (personal communication, 1989).

Part Seven

Objects

As David Kelley points out (1976: 131), the identification of a sign's iconic origin represents an essential (but not always reliable) step toward complete decipherment, since we wish to know why a sign looks the way it does. This section reports on the "things" mentioned in Maya texts, not so much as a comment on the proper methods of decipherment, as to show that the ancient Maya found some objects important. They lavished attention on their decoration, inscribed the maker's or owner's names on them, devised and applied folk classifications (usually inaccessible through conventional means of archaeological classification), and thereby recorded the function of these objects. We can imagine why the Maya did so, particularly during the Classic period ("minor" texts on portable objects virtually disappear in the Postclassic). Conceivably, scribes sought to attach labels of ownership to inherently precious things, made valuable by the skills applied to them or intrinsically by their material, such as jade or Spondylus shell. In anthropological terms, the attribution of ownership established the social "fields" for the bestowal or transmission of such goods, the giver being clearly specified, and perhaps the intended recipient as well. Some texts on preciousities may also have provided clues as to their appropriate ritual use, how they were to be filled with certain liquids or foods, and where such actions were to have taken place. In other words, the texts describe function, dictate the ritual setting of the object, heighten and emphasize value, and associate such value with social transactions. We can now identify a great number of hieroglyphic texts, perhaps the majority, as concerning such matters (D. Stuart 1995). The formula first identified by Michael Coe (the "Primary Standard Sequence") extends to many formats, not only to pots, and usually serves as a rhetorical template for explaining the ritualized, socially "embedded" quality of objects, large and small. What should also be kept in mind, however, is that, whatever the text, the "social biography" of an object (Kopytoff 1986) is not reducible or restricted to its setting at the time of manufacture or transmission to other parties—it continues through other cycles of use and discard until its final deposition, sometimes a "commodity" (that is, involved in exchange), sometimes in sacred, noncommodity states, and perhaps even, in the case of the abundant Altun Ha jades, looted from other locations.

Most of the texts provided below concern portable objects, to be distinguished from nonportable texts, such as the stelae discussed by Nikolai Grube. Mathews was the first to discern "name tags"—statements of possession, both syntactically and probably in terms of real ownership—in

his influential note, provided here with minor emendations courtesy of Dr. David Pendergast. The article by David Stuart encapsulates the breakthroughs on formulae of possession in the mid- to late 1980s, although such advances have now diminished in number as scholars turn increasingly to other problems (see MacLeod 1990a). Details can be added to these essays, such as the recent decipherment by Stuart of the glyph for stelae as lakamtuun, "large stone" or "banner stone" (D. Stuart and Houston 1994: 30; D. Stuart 1996), but the articles below continue to be useful, and, in the case of Grube, regrettably difficult of access.

“Antiquities of Guatemala”

Eduard Seler

In the latter part of the nineteenth century, excavations carried out by Erwin P. Diesseldorff at the site of Chama, Alta Verapaz, brought to light a series of well-preserved ceramic vases, some of which bore hieroglyphic inscriptions that were recognizably similar to the texts in the Maya codices and sculptures. Since the ceramics generally lacked dates, the interpretation of these texts posed special problems for epigraphers of the time.

Eduard Seler was among the first scholars to take notice of the texts on Maya vessels and to interpret their iconography and inscriptions. In the following excerpts, he analyzes another set of vessels, from Río Hondo in the Motagua valley. Seler analyzed these glyphs by meticulously examining their spelling and by comparing them with known hieroglyphs and iconographic elements. His method yielded poor results, yet some of his observations continued to exercise influence. His impression that the texts were repetitious and probably drawn by illiterate artists became common wisdom in the first half of the century, to be reasserted as late as 1962 by J. Eric S. Thompson (1962: 15; see also M. E. Miller 1989).

Nonetheless, Seler was by no means categorical about his conclusions, nor did he generalize them to all Maya ceramic texts. In the paragraphs that follow, he went into elaborate comparisons to interpret the text of the first vessel, while in another paper (Seler 1893) he proposed that the small texts interspersed among human figures in the Nebaj vase were none other than “the names and characters of the persons” depicted on them.

[pp. 113–17]

The sketches of three vessels, which I reproduce below, came to me through the kindness of Mr. Dieseldorff from the above-mentioned Pipil territory of the Río Motagua. They come from the little place Río Hondo, lying on the Motagua opposite the mouth of the Copan river, and belong to the collection of Mr. B. Castañeda in Zacapa. The first vessel (Figure 45.1, c) has a height of 15.3 cm and a diameter at the bottom of 10.5 cm and at the mouth of 16 cm, and the thickness of the walls is 4 mm. The second vessel

Excerpted from Seler 1904.

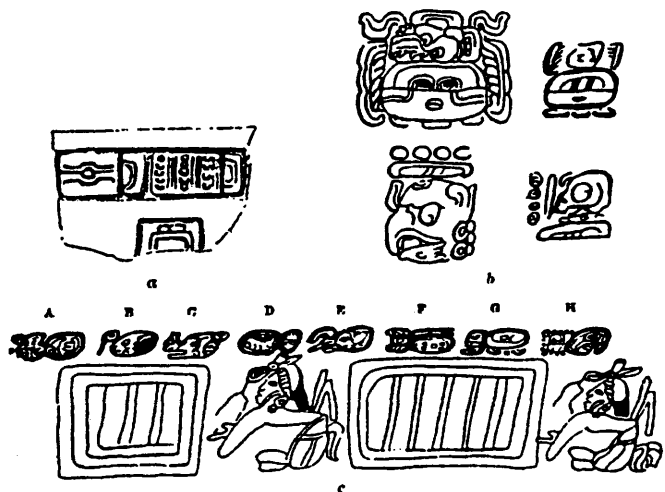


Figure 45.1. Symbolic figures from Guatemalan pottery



Figure 45.2. Glyphs from Maya codices and design on Guatemalan vessel

(Figure 45.2, t) is 17.2 cm high, 13.5 cm in diameter at the mouth, and the thickness of its walls is 5 mm. The figure and the hieroglyph tablet are repeated three times on the circumference of the vessel, but the drawing is badly injured by fire. The third vessel (Figure 45.3, a) is 22.6 cm high, the diameter measures at the bottom 12.7 cm, at the mouth 15.8 cm, and the walls are 6 mm thick.

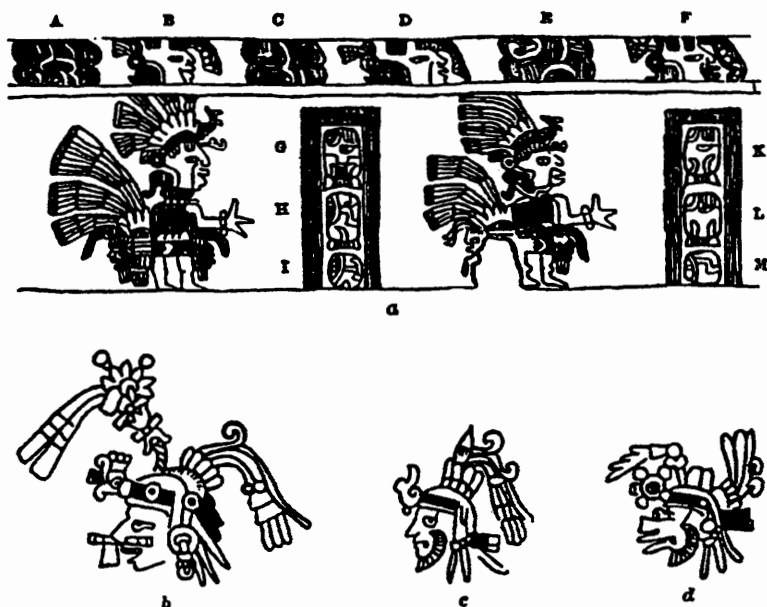


Figure 45.3. Design on Guatemalan vessel and figures from Mexican codices

The first of these three vessels is of pure Maya character. The figures, as well as the hieroglyphs, might have been copied directly from a Maya manuscript. The second is also unmistakably of Maya character, though the position of the figures is decidedly stiffer. The third, however, has an especial character. The models of its figures can only be found in Mexican or kindred manuscripts (Mixtec and Zapotec), and what hieroglyphs there are differ in every way from the familiar forms in Maya hieroglyphs. If it is true of any specimen, we have in this vessel the artistic production of a nation foreign to the Maya soil. It is in all probability to be ascribed to the Pipils, the Nahuatl tribe, who undoubtedly lived here a long time before the conquest.

To begin with the vessel of pure Maya type (Figure 45.1, c), the personages represented on it are women. This is especially proved by the long wisps of hair flying down in front, which can be seen in quite similar fashion on the female forms in the Dresden manuscript. The position of the arms and hands is a favorite one in the figures of gods in the Mexican picture writings, especially in the Borgian Codex and Codex Vaticanus B, which, however, appears also in the Dresden manuscript, for example, in the Moan bird, on page 11a. The raised or outstretched hand is evidently a gesture of speech or of command, which in fact, and especially in this case, are the same thing, for *tlahouani*, or *tlauto*, "the speaker," means the ruler, the prince. The clothing of the figures seems to consist of an *enagua*, a cloth wrapped about the hips like a petticoat and fastened about the middle of the body with a band. Those objects seem to be the ends of this band which are seen to rise above the *enagua* and fall down behind. The figures are represented sitting with crossed legs. Protruding from the *enagua* is the bare left thigh and

below this the naked sole of the right foot, a typical position which is very often drawn in the Dresden manuscript. But the lines in our picture are so displaced as to give the impression that the drawing is not from life, but from a familiar picture repeated in a stereotyped way.

The same impression is made in studying the hieroglyphs. I have every reason to believe that the drawing which I reproduce here is an exact copy. Yet I have the impression that the artist, whether man or woman, who painted these characters on the vessel was not conscious of the meaning of their different elements and lines, and therefore drew them with an uncertain hand. An exact identification is, of course, only possible in the case of a few. All eight hieroglyphs differ from one another, so the next question is, "Where should we begin to read?" The relative position of the hieroglyphs shows that they must be read from left to right. I believe we must begin with the hieroglyph which in the drawing provided by Mr. Dieseldorff . . . stands in the first place at the left. I will designate this by A.

I believe that two elements must be recognized in this first hieroglyph: First, the head of a woman (see the hieroglyph, Figure 45.2, a), but having a peculiar element which is contained in the day sign Eb, "broom," *b*; second, the day signs Manik, *c*, whose phonetic sound is *chi*, which is contained in the hieroglyph Chikin, "west." A combination of these two elements exists in the hieroglyph *d*, which is found on page 62 of the Dresden manuscript, in combination, to be sure, with a third element which has the form of the day sign Imix.

The second hieroglyph, B, must, it seems to me, refer to the hieroglyph *e*, which appears in the Dresden codex, page 12b, as one of the accompanying hieroglyphs of the death god in place of the hieroglyph *f*, otherwise indicated in this place. Hieroglyphs B and *e* are especially characterized as death hieroglyphs by the cross design on the cheek.

It is possible that hieroglyph D also refers to one of the hieroglyphs accompanying the death god, the one of which I have reproduced two variants in *g* and *h*.

The hieroglyphs C and E show the head of a bird which in both cases has a curious projection on the beak. One might think that the great vulture was represented here whose hieroglyph, *i*, *k*, is always drawn with a peculiar projection on the beak and which, in fact, is characterized by a fleshy growth on the cere covering the root of the upper mandible. I believe, however, that, at least in one of the hieroglyphs, it seems to suggest a bird which generally appears accompanying the black god. I have reproduced the whole of this bird in *m*, and its hieroglyph, as it is found in the Troano codex, page 4*c, in *l*. The bird probably represents the wild fowl of the forest region of the *tierra caliente*, which was generally called "pheasant" by the Spaniards, and for which the Maya has the two names *cox* and *mut*. The Mexicans designate this bird by the former name, and also by the word *coxcoxtli*. I believe that this bird must be mentioned in connection with a female deity known among the Mayas of Yucatan under the name of *Yax cocahmut*, in honor of whom feasts were celebrated in the Muluc years, which belonged to the north. From her they feared dryness and drought. The old women danced at her festivals, sacrificed a young female dog to her, and brought her a simple, unembroidered white garment. I think that it certainly follows from these characteristics that it was a form of the ancient earth goddess who was worshiped under this name. I call to mind

that the earth goddess is also represented repeatedly in the form of a bird in the Borgian Codex and the Codex Vaticanus B; that in Maya the word *cox*, or *cocox*, means not only "pheasant," but also "dry, withered, woody fruit," and that the mythical king of Colhuacan, where Ciuacoatl, the earth goddess, was tribal goddess, is called Coxcoxtli.

I find the sixth hieroglyph of our picture, F, again in *n* from the Troano Codex, page 19*c, where it appears interchangeably with the hieroglyph *o* as companion of the hieroglyph *p*. The latter hieroglyph, which is the leading hieroglyph in this passage, appears to me to express the offering of copal or incense. In the former I think I recognize the rattle which regularly accompanies such acts of worship. Compare the pictures of the rattle which I have given in *q*. I call to mind that in Mexican representations, both in stone and picture painting, and also in the Borgian Codex and in Codex Vaticanus B, the earth goddess is always represented with the Chicauaztli, the rattle board, in her hand.

The remaining hieroglyphs of our picture, G and H, are not clear to me, but I notice that the first element of the hieroglyph G appears in the chief hieroglyph, *r*, of the bat god on the vessel from Chama, published by Mr. Diesseldorff (1894, pl. XIII), and that another hieroglyph of this vessel, *s*, is perhaps directly analogous to our hieroglyph G.

The hieroglyphs as a whole appear to me to express an ancient earth goddess who received in her lap the sun and the light and everything living.

We will now pass to the vessel *t*, Figure 45.2. The figure which, with the hieroglyph tablet, is repeated on this vessel three times is that of a man. This is shown by the breechcloth, with ends hanging far down, but which is here accompanied by a short cloth about the hips made of thin veiling or netlike woven material. The body is painted yellow. The position of the arms and hands corresponds to that of the female figures in the vessel just discussed, and probably has the same meaning. Two appendages hang out from the gigantic headdress formed of loops and bands, and these have apparently at their ends two jaguar ears. The reading of the hieroglyphs begins at right with G. It is evident that the hieroglyphs G, E, C, and in a similar way, F, D, B seem to be related, while A is apparently identical with the two heads of birds on the vertical hieroglyph tablet of the lower principal part of the vessel. Thus we have here a case similar to that presented in the curious varnished vessel of Jaina, near Campeche, described by Mr. Strebel (1881) that is, primarily an ornamental adaptation of one or more hieroglyphs, which are repeated with variations. Mr. Strebel is of opinion that each of these variants has its own special meaning, and it may indeed have been so in that particular case, for the symbols near the ear pegs partly recall the different signs on the so-called celestial shields, but in regard to our *t*, I incline to the opinion that we have here mere variants, and I consider the hieroglyphs G, E, C as the chief hieroglyphs of the person represented below, and F, D, B and the bird heads as companion hieroglyphs.

“The Glyphs from the Ear Ornaments from Tomb A-1/1”

with a new introduction and note by David Pendergast

Peter Mathews

*In this brief article, Peter Mathews contributed an important breakthrough in Maya decipherment, although the full implications of this discovery remained unexplored for several years. The central ideas in this essay are Mathews' reading of the **u-tu-pa** compound as a possessed noun—u tup, “his ear ornament”—and his identification of the entire text as a “name tag,” a label for this class of object that also specifies the name of its owner or maker. Subsequent research demonstrated the ubiquity of this type of clause in the Maya corpus. Parallel phrases occur on ceramic vessels and ornaments of jade, bone, and other materials, as well as on nonportables, such as thrones and buildings themselves (see articles by David Stuart on the Primary Standard Sequence and Nikolai Grube on the erection of stelae, this volume).*

In later research, Mathews pointed out that the bat head identified as “D” in the Altun Ha ear ornaments indicates the relationship between a woman and his son (Mathews 1980: 61). This, and the presence of the female head na or ixik at “B,” allows us to identify glyphs “B” and “C” as a woman's name—the proprietor of the ear ornaments—and glyphs “E” and “F” as the name of her son. Mathews' paraphrasing of the text can be restated as: “The ear ornaments of [[female name], the mother of [male name]”; elements of the son's name appear also on a few pots, just after the u way sign that designates the companion spirit of a lord (see Adams 1977: figure 3) Since Mathews' paper, the word tup has appeared on other ear spoons, including fine examples excavated by Ramón Carraso at Calakmul. The drawing presented here, by Emil Hustiu and provided courtesy of Dr. David Pendergast of the Royal Ontario Museum, corrects a few details. Dr. Pendergast has very kindly supplied a new introduction to the find. This we reproduce as a preface to Mathews' text.

INTRODUCTION

Tomb A-1/1, one of 13 encountered in the course of the Altun Ha excavations, has a terminal Ceh Phase date of about A.D. 525–550. The tomb's occupant, a middle-aged individual whose size *in situ* suggested identification as a male, was accompanied by more than 400 artifacts, including one or more jade necklaces, 13 carved jade pendants and numerous uncarved pieces, 21 large ceremonial flints, and the crushed remains of a codex. The ear ornaments that are the subject of the following study stand out even amidst tomb furnishings of such richness, both because of their textual content and because of the extreme rarity of ground obsidian objects in Mesoamerica. The ornaments are 2.85 cm high, have base and lip diameters of 3.7 and 4.4 cm respectively, and are approximately 0.2 cm thick at the neck wall. The glyphs are filled with red pigment, identifiable on the basis of color as cinnabar; one specimen was broken and mended in antiquity.

Note: In the original presentation the cheek of the Glyph B head was shown with a vertical bar at the right of two lines, but subsequent re-examination of the artifacts revealed that the element is in fact an "I L." Emil Hustiu, staff artist in the Royal Ontario Museum Department of New World Archaeology, has accordingly redrawn figure 46.1 to correct Glyph B as well as a number of less critical details in the other five glyphs.

There are three glyph blocks on each of the ear ornaments; the blocks are here designated A to F. The style of the glyphs is clearly Early Classic. The main indication of the early date is the style of the male head at A [*sic*, intended for "B"] and that of the animal head which forms the first half of E. Regarding the latter head, the reader is referred to Proskouriakoff's article (1968) which traces the stylistic form of the glyph from Early Classic examples through examples of the Late Classic period.

There is no clear beginning or ending point in either text. Indeed, at first sight it is even unclear which ornament is to be read first. In the commentary below, however, some arguments will be offered for beginning the text with RP200/1a and with glyph block A as drawn, and continuing through F on RP200/1b. Thompson's system of cataloging the Maya hieroglyphs (1962) is used here.

A 3.89:602 **u-tu-pa**

The first glyph can be seen from many of its environments in other texts to be a functional equivalent of T1, which can safely be read **u**, and means, "his, hers, its, theirs." T89 has been read **tu** by Thompson (1950: 58, 196–197), a reading which I accept. Kelley (1962a: 304) was the first to identify T602 as equivalent to T715, which Knorosov (1958: 471 #8, #30) read **pa**. Reading these three glyphs together, one has **u-tup(a)**, "his *tup*."



Figure 46.1. The glyphs on the ear ornaments from Tomb A-1/1

What does **tup** mean? Brinton answered this perfectly in *A Primer of Maya Hieroglyphics* (1895: 85): “Ear-rings are **tup**, a word which as a verb signifies ‘to stop up, to cover up, to extinguish.’ “ Brinton, of course, had no glyphic examples of the word, and in any case would not have read the glyph group above **u-tup**, but rather **u-chich-??**. The reference in the 16th-century Yucatec Maya *Motul Dictionary* (Martínez Hernández 1929: 872) is: “**tup**; ciertas arracadas de palo antiguas y llamanse assi agora las arracadas o zarzillos.”

In normal Maya phrase structure the possessed object precedes the possessor. In other words, “John’s house” in Mayan would normally be written “his house, John”; “John’s earring” would be “*u-tup* Juan.” This fact suggests placement of glyph block A first in the text. It also enables us to expect the name of the owner of the earrings to follow, and in fact I suspect that the remainder of the text is but a long nominal phrase, with names and titles of the owner of the ornaments.

B 1000D variant?

This head is not in Thompson’s glyph catalogue (1962), but it may be an Early Classic variant form of the *ahau* glyph T1000d, which here probably stands to introduce a male name.

C 74:573?:25??.84:?:60

This is a block that contains several glyphs which are hard to identify. The second glyph is actually identical with Thompson’s affix 274 (1962: 450) and is closer in form to T676 than it is to T573. However, it is my belief that both T274 and T676 (or at least most of the examples of them that Thompson lists) are in fact variants of T573.

The third glyph may be an unusual variant of T25, **ca**, though the border on the bottom of the glyph should continue all the way up the left edge. I cannot identify the fifth glyph at all.

D 126.756A

Which of the three glyph groups on this spool is to be read first is not certain. There is some precedent at Altun Ha for reading the bat-head at D first, for the same glyph occurs elsewhere at the site (RP364/2 and 364/43 from Tomb B-4/7; see Pendergast 1969: Figure 6 and 9 [redrawing of 364/43 makes it clear that glyph D is the bat-head 756a]), where it does seem to be part of a name.

E 788.528

Regarding the first glyph in this block, see Proskouriakoff (1968). The second is the Cauac day-sign glyph. The glyph is polyvalent: as well as **cauac**, it can be read **cu**, **tun**, and possibly **haab**. [Editors’ note: To judge from other examples, the glyphs are probably read **ba-TUN**.]

F XIII.33.1016

A “God C Compound” of some kind is often present in the nominal phrase of Maya lords; its exact significance, however, is still unknown. “God C Compounds” with a numeral prefix are relatively rare. [Editors’ note: This compound read **13 K’U/CH’U**, “13 god.”]

In summary, then, the text of the ear ornament says, “These earplugs are the property of _____ Bat _____.” While the practice of “name-tagging” was not uncommon in the Old World, this is the only example that I am aware of in the Maya inscriptions.

ACKNOWLEDGMENT

I would like to thank David Kelley for his valuable comments on an earlier draft of this paper, and also for referring me to Brinton’s discussion of *tup*.

“Hieroglyphs on Maya Vessels”

David Stuart

In 1973, Michael D. Coe noted the presence of a long, repetitious clause usually painted or inscribed on the rim of Maya vessels. This set of glyphs he dubbed the “Primary Standard Sequence” (Coe 1973: 18): “Primary” because of its size and importance relative to other texts on vessels, “Standard Sequence” because of its formulaic, patterned quality. After considering the funerary context from which the vessels in his sample presumably came most of them were the product of looting Coe proposed that the clause recorded a funerary hymn related to the descent of the Hero Twins into the Underworld, a story vividly told in the Popol Vuh. Although this interpretation is no longer accepted, Coe’s work called attention to the significance of texts on ceramics, a corpus of glyphs assumed by many to be decorative or derivative from monuments (e.g., J. E. S. Thompson 1962: 15). Coe also showed that, while preserving a basic structure, the Primary Standard Sequence displayed a wide range of variability in sign usage.

The following article synthesizes current understandings of the Primary Standard Sequence. It results from the contributions of several epigraphers and should be read together with treatments by Barbara MacLeod (1990a) and Nikolai Grube (1991). Coe (1973: 22) had already observed the presence of personal names at the end of the sequence. As shown by Stuart, these names belong to the owners or makers of the vessels, and the core of the Primary Standard Sequence contains a possessed noun indicating the type of vessel, like-in-kind with the name tags first identified by Peter Mathews.

The Primary Standard Sequence has provided one of the most important areas of recent epigraphic research. It represents an ideal context for decipherment, a “cipher” with sets of substitutable signs. It has also permitted a preliminary conceptualization of Maya folk classifications of pottery (Houston et al. 1989) and supplied data on the persons and offices of Maya scribes (D. Stuart 1987b: 1–8). In recent years there has been less progress on its decipherment, and a few signs (the glyphs after the term for “chocolate”) have proved stubbornly resistant to interpretation.

Our present understanding of the elite and religious culture of Classic Maya citation owes much to the vivid scenes and hieroglyphic texts displayed on ceramic and stone

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vessels. The seemingly countless images of courtly gatherings, conversing gods, battles and ball games, offer a glimpse of Maya life that is seldom apparent on the carved public monuments. Hieroglyphic texts on vessels likewise hold a special fascination, for they sometimes describe and name the actors and events portrayed in the painted or carved scenes. Moreover, glyphs on pottery are of great use when considering larger questions about the nature of the Maya script. The comparative study of the highly repetitive texts on vessels, for example, opens a door on new decipherments that have great bearing on all aspects of Maya epigraphy, and consequently, many larger issues of Maya citation. It is no exaggeration to state that glyphs on vessels comprise the largest and most important body of Classic texts apart from the stone monuments.

This essay is an introduction of sorts to the study of glyphs on Maya vessels. I hope to illustrate some of the basic texts we find on Maya vases, bowls, and dishes, and to analyze some of their structures. But in no way can this claim to be a comprehensive treatment of the subject. The evidence now at hand is simply too new and vast to allow any such treatise in the space here provided. A commentary on the religious components of vessel texts would alone require a more extensive study. Therefore I will concentrate here on the highly repetitious text that appears on so many vessels, known collectively as the Primary Standard Sequence.

THE PRIMARY STANDARD SEQUENCE

Michael Coe pioneered the study of hieroglyphs on pottery with the publication of *The Maya Scribe and His World* in 1973. In compiling numerous painted scenes and hieroglyphs from vessels, Coe noticed the highly repetitious nature of the inscriptions that ran, usually, around the outside rim of vases and bowls. He called the repeating text the "Primary Standard Sequence" of glyphs. Each example contained affixed sequence of signs and sign combinations, some more abbreviated than others. When Coe presented his study, no hieroglyph in the sequence was readable. He surmised, nevertheless, that these texts probably were of a religious or mythic theme, given the predominance of painted scenes of supernaturals in their company. Coe specifically suggested that the sequence may be a mortuary chant or ritual formula, analogous to the Egyptian Book of the Dead.

The decipherment of the Primary Standard Sequence (hereafter PSS) has advanced since Coe's initial findings and suppositions. Specifically, the availability of more pottery texts has allowed for a more refined understanding of their internal structures and forms. The following paragraphs present a brief summary of these revealing structural patterns.

First we must understand that historical names are present in almost all examples of the Standard Sequence. Each example has its main "subject," who is named at or near the end of the passage. On occasion we can recognize these as rulers of certain city-states: a short text on an onyx bowl in the Dumbarton Oaks Collection, for example, names an Early Classic ruler also mentioned in the king-list of Palenque. Another bowl (Kerr no. 1698) names a known ruler of Ucanal, named "Shield Jaguar" (the same name as the celebrated Yaxchilán ruler, but certainly a different individual). But why are these rulers and

other high-ranking personages named on these vessels? To answer this, let us look at the structure of the PSS as it appears before these names.

In a system that may be too simplistic to reflect nuances of the pattern, I have divided the PSS into three forms that progress from simple to elaborate:

1. Possessed noun / Personal Name
2. Possessed noun / Prepositional phrase / Personal Name
3. Introducing glyphs / Possessed noun / Prepositional phrase / Personal Name

Here follows summary descriptions of each of these structures, with some commentary and illustrated examples.

The first pattern (Figure 47.1) consists of two parts: usually the so-called “Wing-Quincunx” (a descriptive term of Coe’s), and a personal name. The Wing-Quincunx and those glyphs that are structurally similar (to be discussed momentarily) are basic components of all examples of the PSS. The Wing-Quincunx takes a number of visual forms (Figure 47.2). Three signs compose its most common form, and all are probably CV syllables. The first sign is always *yu* (T61/62). The middle sign represents a wing (T76/77), a pair of wings, or, very rarely, a full-figure of a bird (T236), but its phonetic value is not securely established. The third element is one of the various forms of *bi*, usually a “quincunx,” but sometimes also represented by a simian head or a footprint. On a very few examples a final *la* follows the *bi*.

When the *yu* sign is in an initial position, as here, it may represent the pre-vocalic pronoun *y-* and the initial *u-* of some possessed nominal or verbal root. The structure of the PSS points to such a possessive function, since the Wing-Quincunx, as the first glyph, precedes a personal name. The final *bi* sign might indicate that the possessed root ends in -b, giving us something like “his *uCVb*.”



Figure 47.1. The basic structure of most standardized texts on vessels consists of a possessed noun and a person name. Here the first glyph known as the “Wing-Quincunx” probably represents the word *y-uch’ibil*, “the drinking cup . . .” The name, written in the final three cartouches, is a known Early Classical ruler of Palenque.



Figure 47.2. Various forms of the Wing-Quincunx

Stephen Houston and Barbara Macleod have independently arrived at a more complete phonetic decipherment of the Wing-Quincunx. They note that the verb for “to drink” is *uch’* (in Cholan languages) or *uk’* (in Yucatecan languages). The noun for “drinking cup” often adds an instrumental suffix (-Vb) to this root, together with the noun suffix (-VI). Thus in modern Chol (Aulie and Aulie 1978: 125) we find *uch’ib’l*, “taza.” Chorti has the slightly different form *ucp’ir* (Wisdom, n.d.) (the *p* is phonologically equivalent to *b* of other western Mayan languages, as is Chorti *r* to *l*). In Colonial Tzotzil the term is *uch’obil* (Laughlin 1988: I, 159), and Yucatec has the gloss *uk’bil*. Since the phonetic clues of the Wing-Quincunx show that the possessed root is likely *uCVb*, Houston and Macleod posit that the middle sign, the wing, to be a *chV* or *kv* syllable. Uses of the wing sign in other glyphs suggest that *ch’i* is the most likely reading, yielding the full form *yu-ch’i-bi* or *y-uch’-ibi(l)*. The most basic component of the PSS on vases therefore seems to read “the drinking-cup of . . .” As would be expected, the Wing-Quincunx occurs on bowls and cylindrical vases, but never on inscribed plates or dishes. In its place, as Houston and Taube (1987) demonstrate, is the combination *u-la-ka*, for *u lak*, “the clay plate of . . .” It stands to reason, therefore, that the personal name found in all PSSs refers to the cup’s owner.

Decipherments such as these seem a far cry from the staid historical formulae of the public inscriptions. But we must understand that Maya hieroglyphic texts do not merely relate name-and-date outlines of ancient history. We know that texts may directly mention the artifacts, monuments or buildings upon which they are inscribed. Glyphs on a shell or jade plaque, for instance, will very often provide information on the owner of an object and the type of object in hand. Mathews (1979a) was the first to identify such name tags with his recognition of the glyph *u-tu-pa* as *u tup*, “the jewel of . . .,” on a jade earspool from Altun Ha, Belize. Longer texts on monuments or buildings also make some reference to their own physical settings, giving dates for erection and dedication rites, and labeling information along the lines of *y-otot*, “the house of . . .” are very common. Sometimes included in such passages are the actual proper names for artifacts and monuments. It is of little surprise, then, to find that glyphs on pottery work in much the same way.

As we have seen, different glyphs designate different vessel types (Figure 47.3). The Wing-Quincunx is confined mostly to cylindrical vases, round bowls, or generally any pot that would hold a reasonable amount of drink. On flat round plates we sometimes find *u lak*, “the plate of,” in a structurally identical position. Houston has shown me another glyph, *u-ha-wa-te*, that may designate plates with legs. Other glyphs representing possessed nouns may remain undeciphered, but it stands to reason that these too would refer to types of vessels or their contents.

Now that the most basic form and meaning of the PSS is clearer, let us turn to elaborations on the simple pattern: often between *y-uch’-ib-il* (or a similar possessed noun) and the possessor’s name are several glyphs not yet discussed. The intervening sequence may take various forms, but in nearly all cases the first of the new glyphs is introduced by the preposition *ti* or *ta* (Figure 47.4). This may indicate that the new elements of the PSS form a prepositional phrase that modifies the possessed vessel reference.

The phrases mostly fall into several types, but again this may be too simple a division. The phonetic elements *ta-tsi* / *te-le* / *ka-ka-wa* are quite common after the Wing-Quincunx. Also in this position one may find the sequence *ta-yu-ta-la ka-ka-wa*. On occasion the

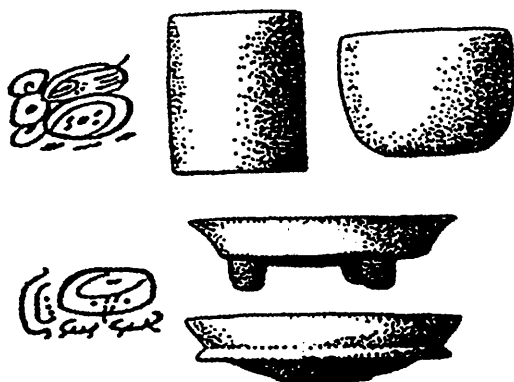


Figure 47.3. Two common hieroglyphic terms for different vessel shapes. The Wing-Quincunx glyph refers to drinking vases (*uch'ib?*); the second glyph ("the *lak* of . . .") is found on shallow plates used for food.

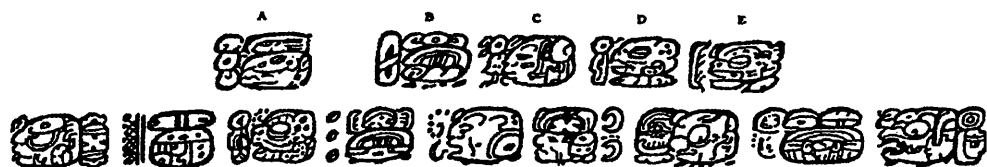


Figure 47.4. Prepositional phrases are sometimes inserted between the possessed noun and the personal name, as shown here in a vessel text from Burial 196 at Tikal. After the Wing-Quincunx, a sequence of four glyphs may refer to the intended contents of the vessel (note **ka-ka-wa** at position E). The long chain of glyphs contains the name and titles of "Ruler B" of Tikal.

two seemingly combine in some manner, as in *ta-yu-ta-la / i-tsi / te-le / ka-ka-wa*. Another phrase, much rarer than the others, is the single glyph introduced by the same preposition, *ta-u-lu*. We should take note that the first two forms share *ka-ka-wa*, which presumably corresponds to Mayan *kakaw*, that is, "cacao" (often abbreviated as *kawa*) (D. Stuart 1988). Moreover, the combination of the simpler third form of the phrase, *u-lu*, can perhaps be read *ul*, "atole, corn gruel." Both cacao and atole were important and well-known drinks in ancient Mesoamerica. I suggest that these prepositional phrases are elaborations on the sequence which tell us something of the function of the vessels, namely their use as containers for specific types of beverages.

But the signs that precede the *ka-ka-wa* glyph have yet to be explained. No readings are obvious, but the combination *tsi-te-le* or *i-tsi-te-le* recalls the Yucatec entries for the botanical term *itsimte* or *itsinte*: "a plant with which the Indian women season posole, camote stew, and other things" (Pío Pérez 1866–77: 156). The glyphs might therefore tell us of a certain recipe for cacao beverages which make use of seasoning from the *itsimte* plant. Concerning the signs *yu-ta-la* before *ka-ka-wa*, I have no suggested decipherment.

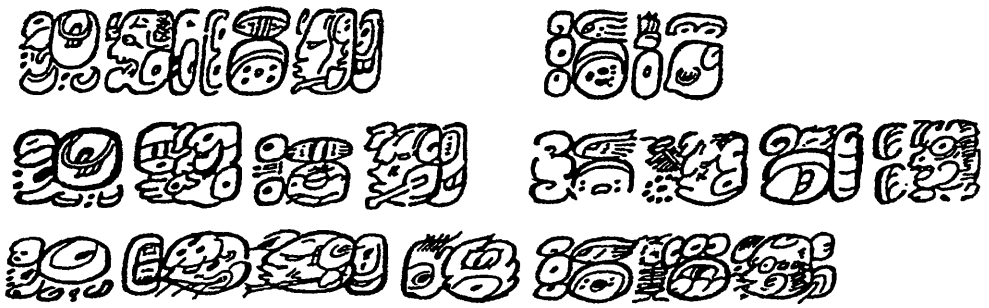


Figure 47.5. Three PSS texts employ sequences of “introducing glyphs” before the Wing-Quincunx. Note the **ts’i-bi** spelling for *ts’ib*, “paint,” before the **na** profile glyph in all three texts.

Given this expansion on the PSS, then, it seems reasonable to suppose that pottery vessels were used as containers for beverages. Landa and other early chroniclers make it clear that drinks were important in Maya ritual life. For example:

They make of ground maize and cacao a kind of foaming drink which is very savory, and with which they celebrate their feasts. (Tozzer 1941: 90)

The famed Princeton Vase shows a liquid (presumably some cacao or maize drink) being poured from a cylindrical vessel. It stands to reason that elaborately decorated Maya vessels were not always made for funerary purposes, but were rather the well-used beverage utensils of the deceased, used in both ritual and daily life.

The third and most elaborate form of the PSS reveals the addition of yet more components that we may call, in the absence of a better term, “introducing glyphs” (Figure 47.5). These precede the Wing-Quincunx and its structural relatives. Unfortunately much of this section eludes decipherment, but there is strong evidence that it refers, at least in part, to the manner of decoration of the vessel.

The passage that precedes the possessed noun may take several forms. A frequent component I call the “initial glyph,” seen as the first glyph in all three examples in Figure 47.5. This glyph is often used to locate the starting point of a text running in a seemingly continuous band around a vessel’s rim. The same glyph appears in the monumental inscriptions in a much different environment. There it customarily precedes hieroglyphic dates or verbs, perhaps as a marker of emphasis within a larger narrative structure of a text. I cannot posit a tentative reading for the initial glyph in any such context, but we should keep its many uses in mind for future considerations.

A glyph whose main sign represents the head of God N usually follows the initial glyph. Usually T88 is its suffix. This glyph is often replaced by a stepped sign with associated affixes that must somehow be equivalent. Other glyphs appear in this position and thus seem closely related in general function. I must stress the point that the head

glyph of God N must not necessarily be some proper name or designation. On the contrary, structural analysis of this God N head glyph in pottery and stone inscriptions leads me to believe that this glyph represents a verb whose unknown meaning seemingly has little to do with this deity. As a putative verb, the God N glyph appears in a variety of contexts to be discussed momentarily.

Occasionally the God N glyph and its relatives are altogether absent from the introducing section of the PSS—in such cases it is not unusual to find the combination *ts'i-bi* immediately after the initial glyph. In a previous paper I have outlined the evidence for reading this glyph *ts'ib*, “to paint, draw” (D. Stuart 1987b). This glyph may tell us the manner of decoration of the vessel, but again this is a point we will soon discuss in fuller detail.

With few exceptions, the combination *na-ha-la*, or sometimes simply *na-ha*, follows *ts'ib*. I have combed the dictionaries for a reading based on *nah-al* but none seems adequate in this context. Perhaps this is rather some grammatical suffix to *ts'ib*, but this is a matter best left open for the moment. God N and *ts'ib* sometimes appear together, but in such instances the pronoun *u* is customarily added as a prefix to *ts'ibi*. Near the close of these initial glyphs, and immediately before the possessed noun of the PSS, is found the combination *hi-chi*, occasionally spelled *yi-chi*. Macleod (1989) believes that this is related to the Yucatec term *hech*, “writing surface,” and Tzeltalan *jehch*, a classifier for pages. The apparent association of the *hichi* glyph with *ts'ib*, “to write, paint” is certainly in keeping with such a reading.

Our discussion of the structure of the PSS made note of the fact that *ts'ib* was an important element within the curious set of glyphs that preceded the possessed noun, or probable vessel reference. It was suggested that this was some allusion to the vessel's painted mode of decoration, and indeed *ts'ib* occurs almost always on painted vessels. The numerous ceramic and stone vessels that bear relief carving or incised decoration do not have *ts'ib* in their PSS texts. In place of *ts'ib* on these vessels is the so-called “*lu-bat*” glyph. The pattern of co-occurrence is visible in nearly all inscribed Maya vessels with extended versions of the PSS. We may tentatively conclude that the *lu-bat* glyph somehow refers to the mode of decoration found on objects that are carved or incised rather than painted. The glyph in question (Figure 47.6) usually appears as two signs, but in reality there are three constituents. The first sign is the syllable *yu*, and the second represents the head of a bat. As we have seen on the Wing-Quincunx, *yu* sometimes serves to indicate the initial prevocalic pronoun *y-* (“his, her, its”) before a noun or verb root beginning in *u-*. The sign may have a similar function here. Combined with the bat are the distinctive features of the *lu* syllable. In some examples, the *lu* and the bat signs are separated, revealing their proper reading order. The bat sign is not yet deciphered, although I previously felt that a similar sign may represent the syllable *ts'i* in some spellings of *ts'ib*. I doubt that this is the function here, however. Other circumstances of its use suggest that the bat head may correspond to another syllable altogether, perhaps of Consonant-*u* value.

In any event, it remains impossible to venture a complete phonetic decipherment of the *lu-bat* glyph (*yu-lu-?*). We must remain cautious in any attempt to apply a precise translation to the *lu-bat* glyph, since no phonetic decipherment can yet be offered with



Figure 47.6. The **lu**-bat glyph

assurance. Some meaning related to the act of carving or sculpting would fit the known environments of its use, but this is no guarantee of literal translation.

To summarize our findings thus far: The PSS as described first by Coe is similar to other texts on portable objects: it is, primarily, a descriptive “tag” for vessels of various types. The most fundamental tag simply names the owner of a given vessel, very likely the one for whom it was commissioned. More information about the vessel is presented in elaborations of this basic pattern. One extended form of the PSS speaks of the contents of the vessels, such as cacao drink, corn gruel, etc. The longest version of the PSS begins with a series of glyphs that, at least in part, may discuss the manner of the vessel’s decoration. Despite the inevitable variations on its internal structure, the PSS can be viewed as a fairly simple formula for tagging a vessel with the name of its owner and/or commissioner.

On rare occasion the PSS will have a Calendar Round date precede the introducing glyphs described above. I very much doubt that these dates relate in any way to the scenes rendered on pottery. Rather, given their placement in the PSS, I presume that these are the actual dates of the painting or carving of a given vessel. In addition to references to types of decoration and vessel function, the date is one more elaboration on the pattern we have seen.

The PSS is not restricted to vessels. Variations appear in a variety of contexts, and all are distinguished by the nature of the possessed noun. Let us look for example at a portion of the text inscribed on the front of Lintel 25 from Yaxchilán (Figure 47.7). In its structure, the passage is essentially the same as any text painted or carved around a vessel’s rim. We find it beginning with a date (3 Imix 14 Chen), and the verb is represented by the familiar God N head. The *lu*-bat comes next, replacing the *u-ts’i-bi* seen on painted pottery, followed in turn by the possessed noun *y-otot* (*yo-otot-ti*), “the house of . . .” As we may expect, a personal name closes the passage. The house glyph here stands in the place of the Wing-Quincunx and related terms found on vessels, strengthening the interpretations of these glyphs as direct references to the objects upon which they are inscribed. The lintel of Yaxchilán was of course placed in an architectural setting, and its text “tags” the building with the name of the owner, “Lady Fist-Fish.” In all respects, then, this is a true PSS.

The same text formula was used as a tag on clothing. In the celebrated paintings at Bonampak, one figure wears a skirt bearing two visible glyphs (Figure 47.8). Obviously these are but parts of a longer text that continues in a horizontal band along the back of the skirt to the opposite side. Note that the two visible blocks are, respectively, the initial glyph and the God N head familiar from the Standard Sequence. A more complete text appears on the clothing of the standing female portrayed on one side of Calakmul, St. 9

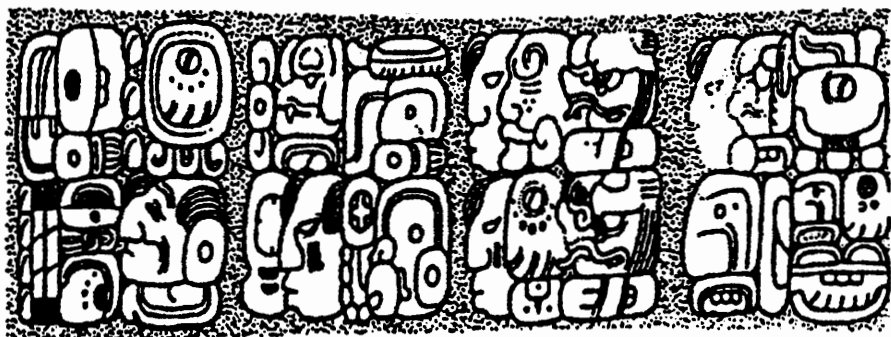


Figure 47.7. A PSS related passage from Yaxchilan, Lintel 25



Figure 47.8. Glyphs painted on the hipcloth of a figure in the bonampak murals (after M. E. Miller 1986b, Fig. III.13)

(Marcus 1987: 162–163). We see in this short chain of glyphs many of the vital components of PSS: the initial glyph, *ts'ib*, and the *hi-chi* combination. Clearly these constitute one of the forms of the introducing passage of the Standard Sequence. It is interesting to note, however, that the most vital component, the possessed noun, is hidden behind a sash that falls from above. Like the glyphs on the skirt at Bonampak, this is a text that is not meant to be read. It is more a feature of the woman's dress that is included as another detail in her portrait. The ancient viewer, knowledgeable of this name-tagging formula, would not need to see all the components of this text. Conveniently for us, the name of the woman does continue from behind the sash, however, and so we have no trouble identifying her portrait.

From examples such as these it is best to see the PSS as a formulaic expression for the name-tagging of numerous types of objects from daily and ritual life—drinking vessels, clothing, monuments, and presumably other artifacts. Declarations of material ownership seems a pervasive trait of the Maya nobility.

PAINTERS' SIGNATURES

The *ts'ib* hieroglyph, as we have seen, appears in pottery texts as a possible reference to painted decoration on pottery. But we have yet to mention another important context of the glyph. On some painted vessels, *u ts'ib* appears outside the PSS as the initial element in texts of varying length. The structure of such texts never varies: *u ts'ib*, "his

painting” followed by glyphs holding a personal name. The simple pattern can only be interpreted as an artist’s signature. A brief glance at several examples of these putative “signatures” may allow us to recognize, by name, some of the celebrated artisans of Classic Maya civilization.

We begin with an illustration of one of the longest examples of pattern, incised upon the lower edge of a vessel of unknown provenance that, as will be seen, may have come from the area of Naranjo, Guatemala (Figure 47.10). The *u-ts’i-bi* glyph is clearly recognizable at position X but this is not a part of the PSS, which may clearly be seen at the upper rim of this vessel. Certain elements of the three glyphs that appear after *u-ts’i-bi* show us that these together constitute a personal name. Note in particular the *i-ts’a-ti* glyph imbedded in the block at Z. which very probably gives the word, “artist, learned one.” The block at A’ reads *a-ma-xa-ma*, perhaps for *ah maxam* “He of Maxam” (a place name?). Regrettably, we cannot read all the actual constituents of the individual’s personal name at Y and the first part of Z. The protagonist’s mother and father are named in the remaining thirteen glyph blocks. According to the text, the mother, named from C’ to Q, is a lady from the site of Yaxha, Guatemala. The father’s name, from S to W, is of very special note: as Coe notes (1973), it is the name of a ruling lord of the ancient city-state of Naranjo. We therefore see a simple two-part structure to this lengthy chain of glyphs: *u ts’ib*, “the painting of” and an ended name phrase that includes information about the subject’s immediate ancestry. Taken literally, and there is no reason not to do so, this second text must, I think, name the actual painter and calligrapher who decorated the surface of this elegant vase. The artist, or *its’at* as he is here called, was the child of the ruler of Naranjo. The signature on this vessel recalls the later documentary sources of central Mexico, such as the Relación de Texcoco and the Florentine Codex, that mention nobles and their common roles as scholar-painters. Mythic and iconographic evidence reveal that the role of the artist, or *its’at*, was a common pursuit among Maya royalty as well. The signature of the Naranjo prince is the most explicit confirmation of this supposition from the ancient sources. Personal signatures are very rare in the history of art. With only a few exceptions (Attic vase painters come immediately to mind) ancient painters and sculptors preferred to remain anonymous. In most ancient traditions, the identity of the artist was altogether subordinate to the larger significance of the work itself. I believe that this is certainly true in most Mesoamerican traditions of art. Aztec artists, for all we know of their philosophical outlook and social status (León-Portilla 1959: 258–271), did not tag sculptures and paintings with markings that could be taken as personal signatures. The absence of artist’s names is not due to the lack of a “true” system of writing in central Mexico. On the contrary, personal names were easily rendered in the Aztec script, even though in a somewhat simple system in light of Maya hieroglyphic writing. We must assume, therefore, that Aztec art was really never meant to be identified with the names of particular craftsmen. The sacred subject matter was not to be diminished by any intrusive, personal claim by the artist.

This makes the presence of signatures in Maya art all the more extraordinary. Early Maya sculpture and painting lack artists’ names; signatures are only a characteristic of some Late Classic examples. Indeed, the span of time where we see sculptors’ names at Piedras Negras lasts no more than 150 years. The signatures disappeared with the onset

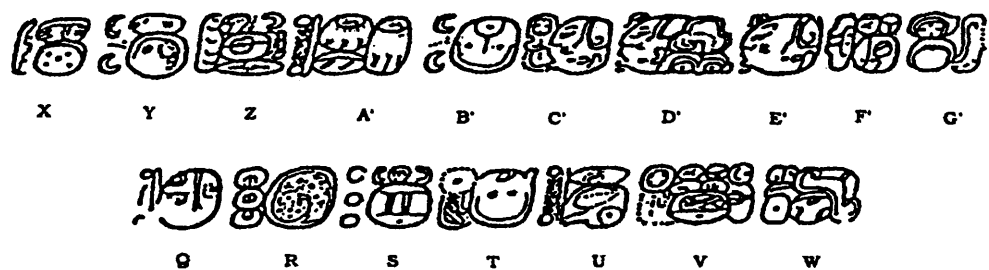


Figure 47.9. The painter's signature from inscriptions in figure 47.10

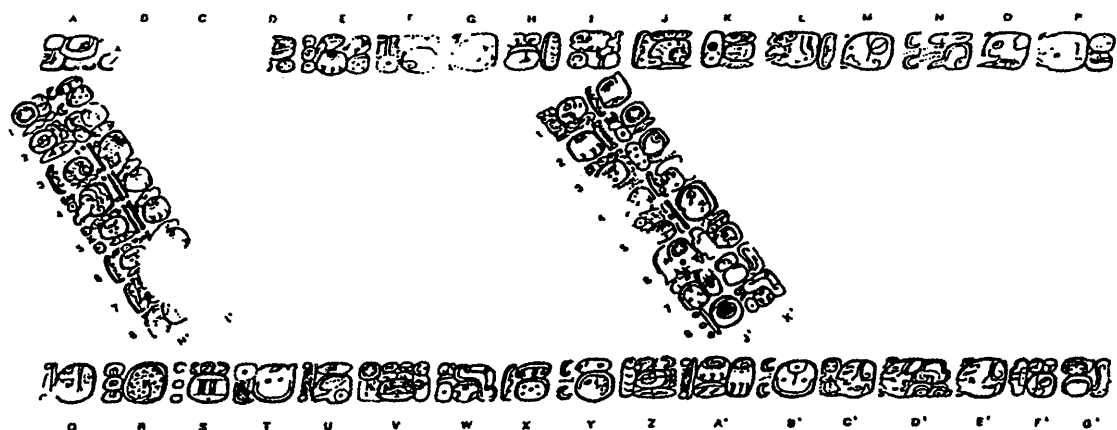


Figure 47.10. Detail of a rollout drawing of inscriptions on a cylindrical vessel

of the Classic Maya collapse near 950 A.D. Within this short-lived period, we witness a profound deviation in the relationship between the artist and his work. Rather suddenly, the personal identities of painters and carvers carry real significance for the art itself. For some reason that remains obscure, several painters of Late Classic times began to view their own names as important features of the works they undertook to create. Within a short time the signatures fall away, and the artists are once again anonymous. The cultural and psychological factors behind such momentous changes are fascinating, and pertain directly to profound questions of how an artist, and the society of which he is a part, views his own craft.

HIEROGLYPHS AND THE PROVENIENCE OF VESSELS

It goes without saying that vessels lacking precise archaeological context limit our ability to understand these artifacts as cultural objects. But the inscriptions do allow us to identify the functions of some vessels and the names of individual artists and owners or patrons. Beyond this, glyphs do not hold many answers for reconstructing original provenience. Of course we have seen one vessel whose artist had family connections to the polity at Naranjo, and there is independent evidence that this and related vessels

were manufactured at or near there (Reents-Budet 1987). Coe (1978: 96) suggests that Naranjo was where all the vessels were illicitly excavated. But can we be sure that the grave robbers actually found all of these pots at Naranjo? This sort of question is important (and often ignored) for anyone who works with unprovenienced material bearing hieroglyphic texts.

But, to reiterate, hieroglyphs do not necessarily tell us that much about the original context of looted artifacts. To illustrate this point we need look no further than the excavation reports. Archaeological evidence suggests that Maya artists often traded their polychrome pottery far from their point of manufacture. Adams (1977: 412–413) illustrates this point in his discussion of the vessels from Burials 96 and 128 at Altar de Sacrificios. On stylistic grounds, Adams concluded that 15 of the 19 pots in both burials “Were imported from zones outside of the Altar de Sacrificios district.” These foreign vessels apparently were traded from the Middle Usumacinta region, the Central Peten, and the Alta Verapaz. I would not necessarily agree with Adams’ conclusion that these pots were originally brought to that site as funerary offerings. It seems just as likely, at least, that such vessels traveled over time, gradually coming to be owned by the deceased.

Another group of related vessels of early Tepeu date are surely by the same artist, one of these have been found in Burial 72 at Tikal (Coe 1965: 39; Coggins 1975: Figure 87) and another in Uaxactun Burial A23 (R. Smith 1955: Figure 70). A third pot by this artist is in the Kerr archive (No. 1288), and a fourth is in the collections of the Duke University Museum of Art (Bishop et al. 1985: Figure 1a, b). The Tikal, Kerr, and Duke vases all name as their “owner” a Middle Classic Naranjo ruler called “Chief Double-Comb” by Closs (1985). It is very doubtful that Chief Double-Comb was the occupant of Burial 72 at Tikal, however. Clearly, it would be rash to conclude that the person named on the Uaxactun pot was the occupant of the tomb where the vessel was found. The same is true, I think, of any example of Maya pottery in funeral context. Archaeologists, including epigraphers and art historians, must therefore be careful in drawing their conclusions from information supplied by inscriptions on portable artifacts. With this said, it is quite conceivable that the three pots by Coe’s Naranjo painter originated from two or three burials, if not different sites altogether.

To summarize, very many Maya “funerary vessels,” including the three in Naranjo style under discussion here, were used to hold cacao beverages. Most pots were traded far and probably well used before finally resting in caches or with their owners in burials. Information provided by hieroglyphic texts on pottery can be very revealing about the persons who commissioned and decorated these vessels.

In briefly reviewing the PSS and artists’ signatures on pottery, we see a reflection of the general advances made in recent years in the decipherment of Maya writing. Work in the specialized area of inscribed vessels has progressed rapidly, and will surely continue to do so. Of course, great credit for this must go to the availability of the Kerr archive of photographs. Publication of this monumental collection will surely lead to more exciting discoveries in glyphs and in most other aspects of ancient Maya culture.

“Die Errichtung von Stelen: Entzifferung einer Verbhieroglyphe auf Monumenten der klassischen Mayakultur”

Nikolai Grube

Nikolai Grube was born in Bonn, Germany, in 1962. From an early age Grube developed a strong and intense interest in ancient scripts and languages, which he began to study in earnest after matriculating at Hamburg University in 1982 and after several years of informal contact with the distinguished Americanists Thomas Barthel and Karl Anton Nowotny. Grube's M.A. degree was awarded in 1985, when he submitted a thesis entitled, in English translation, "The Structure of the Primary Standard Sequence from Ceramics of the Classic Maya Culture"; a much-revised version appeared in 1991 (Grube 1991). In 1990, he published his doctoral thesis at the University of Hamburg, The Development of Maya Script: Bases for Investigations of Changes in Maya Script from the Protoclassic until the Spanish Conquest (Grube 1990a). Since then he has worked as a librarian, instructor, and researcher, at, among other places, the Seminar for Ethnology at Bonn University, which contains at present the greatest concentration of Mesoamericanists in Germany.

Grube's research exemplifies the "new epigraphy" described by Michael Coe (1992: 231–58). Among its methods are a systematic search for phonetic values, both for their own sake and as clues to logographic decipherment; rigorous testing of ideas in various hieroglyphic contexts; a growing linguistic sophistication about "Classic Mayan" (and its variants), with less emphasis on inscriptions as reflections of the structure and content of modern Mayan languages; an intimate familiarity with the entire corpus of Maya inscriptions, most of which have been committed to memory by younger epigraphers; an ability to draw hieroglyphs and to understand their archaeological setting; comprehensive attention to the iconographic referents of Maya texts; and, finally, a heightened awareness of ethnographic and ethnohistorical information, from which Maya epigraphy deviated somewhat in the 1970s and 1980s. The article published here, hitherto hard to find, represents an excellent test-case of these methods, leading to the decipherment of a syllabic

Written in 1990 by Nikolai Grube (1962–). Translated from Grube 1990b, with permission. Not for further reproduction.

glyph, ts'a, and the elucidation of an important segment of Maya ritual behavior. Since the appearance of Grube's article, the understanding of dedication ceremonies involving stelae has expanded in many ways (Stuart 1996). In retrospect, the one minor cavil we have is that the root described by Grube, tz'ap, may have had secondary uses in the Classic period, particularly in reference to the "heaping" of objects, such as tribute.

One of the most common verbs that appears as a hieroglyph on monuments of the Classic Maya will be described, analyzed, and interpreted in this manuscript (Figure 48.4). It concerns a hieroglyph that refers to the process of the erection of stelae. It is true that several attempts already have been made to interpret the hieroglyph (Barthel 1968: 145; Berlin 1970c: 10; Schele 1982: 182; Houston n.d.: 9); nevertheless none of the efforts toward interpretation has relied on a systematic investigation of the entire set of appearances of the hieroglyph in the corpus of inscriptions. A serious investigation of this hieroglyph seems appropriate even if only for the reason that it is one of a series of recently discovered hieroglyphs whose subject is the manufacture, function, and possession of inscribed objects (Mathews 1979a; Justeson 1983; D. Stuart 1984b; Houston and Taube 1987; Grube 1986b).¹

The investigation of hieroglyphs takes place in three steps. The first step is the description of the hieroglyph and the context in which it appears. Since all findings in this section are observations and no interpretations have been made yet, we are dealing here with description only. In order to be able to tell apart the various observed findings that refer to different types of contexts, the respective findings are listed separately and numbered in continuing sequence. In the course of the analysis this procedure will allow a clear ordering of particular findings into a sequence, and thereby promote the clarity of the argumentation.

The second step is the semantic interpretation of the hieroglyph under investigation. Here the argument relies on the previously obtained findings. The third step is the grammatical reading of the hieroglyph. This is founded both on the findings obtained from the first step and on the result of the semantic interpretation rendered by the second step. The highest level of interpretation of hieroglyphs that can be obtained within this framework is reached in the grammatical reading. Morphological and syntactical investigations, whose purpose is the creation of a potentially complete correspondence between hieroglyphs and speech, follow the decipherment.

In conclusion, two hieroglyphs are introduced that perhaps indicate a semantically analogous interpretation to the hieroglyph under investigation. This provides possible connections for future investigations.

DESCRIPTION OF THE HIEROGLYPH UNDER INVESTIGATION

The hieroglyph under investigation here is transcribed in the Thompson catalog (1962: 214) as T68:586 (with variable pre- and postfixes). Thompson's transcription of the superfixes is inaccurate, however, and refers to few and carelessly executed forms. At any rate, the main sign of the hieroglyph is T568. A careful inspection of all occurring

TIK St.31, O1		9.0.10.0.0
QRG St.C, A7	9.1.0.0.0	9.17.5.0.0
TIK St.12, D2	9.4.13.0.0	9.4.13.0.0
LAM St.9, A4	9.5.19.0.0	9.5.19.0.0
CRC St.1, C2	9.8.0.0.0	9.8.0.0.0
CPN St.E, B10	9.9.2.17.0	9.9.5.0.0
CPN St.19, D3	9.10.19.15.0(?)	9.10.19.15.0
CPN St.1, C3	9.11.15.14.0	9.11.15.14.0
CPN St.5, B7	9.12.0.0.0	9.12.0.0.0
TNA Mon.26, A7	9.12.10.0.0	9.12.10.0.0
CPN St.6, C6	9.12.10.0.0	9.12.10.0.0
PRU St.34, D4	9.13.0.0.0	9.13.0.0.0
DPL St.1, B1	9.13.15.0.0	9.13.15.0.0
CPN St.C, A10	9.14.0.0.0	9.14.0.0.0(?)
DPL St.26, C5	9.14.10.0.0	9.14.10.4.0
NAR St.18, H6	9.14.14.7.2	9.14.15.0.0
CPN St.H, A2	9.14.19.5.0	9.15.0.0.0
CPN St.A, A10	9.14.19.8.0	9.15.0.0.0
NMP St.2, D4	9.15.0.0.0	9.15.0.0.0
CPN St.B, B1	9.15.0.0.0	9.15.0.0.0
CPN St.4, A8	9.15.0.0.0	9.15.0.0.0
ARP St.2, C2	9.15.0.0.0	9.15.0.3.5
CPN St.D, B4	9.15.5.0.0	9.15.5.0.0
MQL St.11, A4	9.15.10.0.0	9.15.10.0.0
ITP St.4, A3	9.16.0.0.0	9.16.0.0.0
QRG St.J, A12	9.16.5.0.0	9.16.5.0.0
CPN St.M, B4	9.16.5.0.0	9.16.5.0.0
CPN St.N, A16	9.16.10.0.0	9.16.10.0.0
QRG St.D, D17	9.16.15.0.0	9.16.15.0.0
QRG St.E, D9	9.17.0.0.0	9.17.0.0.0
QRG St.A, A10	9.17.5.0.0	9.17.5.0.0
HIG St.1, D5	9.17.10.0.0	9.17.10.0.0
NAR St.36, C1	9.17.10.0.0	9.17.10.0.0
IXZ St.4, A2	9.17.10.0.0	9.17.10.0.0
QRG St.H, C3	9.17.17.13.0	9.18.10.0.0 (?)
BPK St.2, D5	9.17.18.15.18	9.17.18.15.18
CRC St.11, A2	9.18.10.0.0	9.18.10.0.0
COL Barb. Ponce St., B2	10.3.0.0.0	10.3.0.0.0
QRG St.C, B7	13.0.0.0.0	9.17.5.0.0
QRG St.C, A10	13.0.0.0.0	9.17.5.0.0
TZM St.2, pC3	-	-
MADRID 27B-28B	-	-

Figure 48.1. List of all occurrences of the investigated hieroglyph

forms shows that the hieroglyph that Thompson transcribed as T68:586 really consists of a main sign T568, which has been infixed in the center of the affix T68 (Figure 48.4, b), which has been rendered only incompletely in the catalog. This morphological derivation can be seen clearly in the occurrence of the hieroglyph, in which T568 is not infixed into the affix, but in which this is placed as a superfix above the main sign (Figure 48.4, c). In the following discussion, this “proper” affix T68 will be transcribed as T68+ in order to distinguish it from Thompson’s faulty form. It consists of three elements, of which only the top part corresponds with the “old” T68. It is placed on a circular surface, into which T568 is usually infixed, and as a third component an oval element appears, which

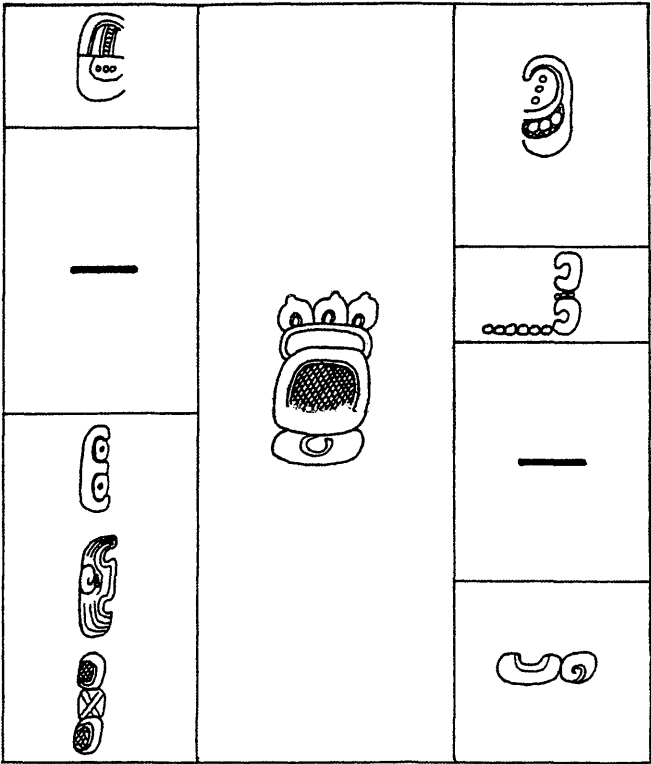


Figure 48.2. The morphology of the examined hieroglyph

contains a small hook (similar to T19). The infixation of T568 in the center part of T68+ creates the appearance that we are dealing with three independent signs. Since, in many cases, in which T568 is infixed into T68+, the lower oval of T68+ is simply left out, frequently only that fragment that Thompson illustrates in his catalog as T68 is left over from the affix T68.

The forms of the investigated hieroglyph, in which T68+ is placed above the main sign as a superfix, tend to occur more frequently in earlier inscriptions (Tikal St. 12, D2—9.4.13.0.0; Caracol St. 1, C29.8.0.0.0; Copán St. E, B16—9.9.2.17.0), but are not limited to these (Bonampak St. 2, D5—9.17.18.15.18). The investigated hieroglyph is also found in the codices.

THE CONTEXT OF THE HIEROGLYPH T68+:586
IN THE INSCRIPTIONS

All the occurrences in the hieroglyphic texts of the investigated hieroglyph T68+:586 are listed in Figure 48.1. The table shows that the hieroglyph was used first of all in the central Petén and later spread to the “southeast province,” first to Copán, and later to Quiriguá. Interestingly, in three cases T68+:586 appears in texts from Yucatán (Itzimte

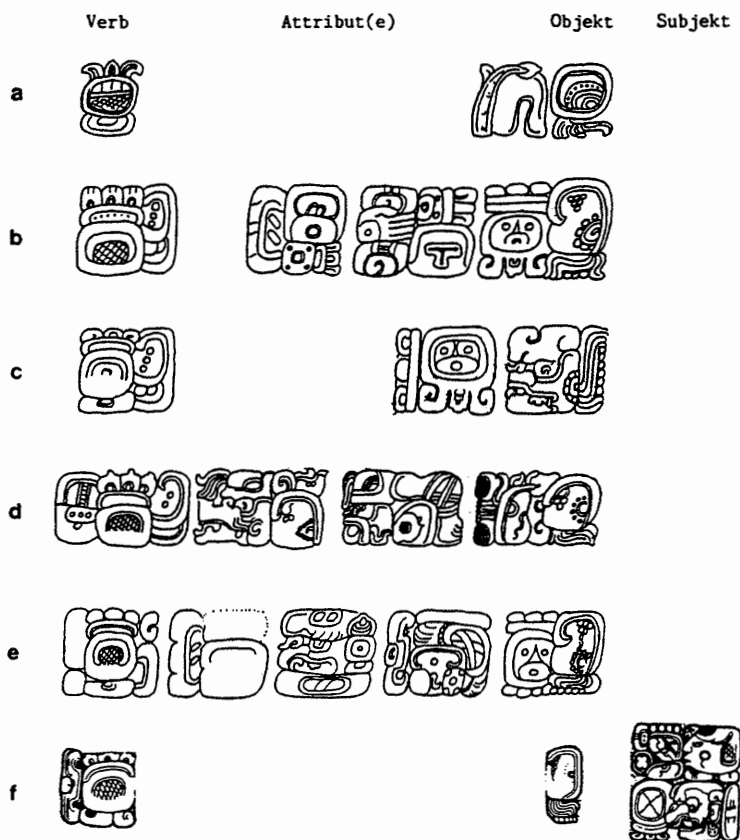


Figure 48.3. The syntax of some selected text passages with T68+568

St. 4, Tzum St. 2, and on a stela in the Barbechano-Ponce collection in Mérida; cf. Mayer 1984 Cat. No. 112). These occurrences may be shown as a further indication for intensive contact between Copán and the Campeche/Puuc region, which has been suspected for the reign of Ruler "Madrugada" of Copán.

Using the list of all the appearances of T68+:586, as well as an analysis of their occurrences and their contexts, real observations can be made for a subsequent interpretation:

1. On stone monuments the hieroglyph appears exclusively on stelae (and not on lintels, hieroglyphic stairways, altars, etc.).
2. The date that precedes the hieroglyph syntactically is—with a few exceptions—the latest date recorded on the monument. Quiriguá St. C is one such exception, but on this stela the majority of the dates are not historic, but are projected far into the past, or far into the future. On three stelae from Copán, one stela from Arroyo de Piedra, one stela from Dos Pilas, and one stela from Naranjo the dates of T68+:586 lie within one 260-day period of the last date of the respective monuments:

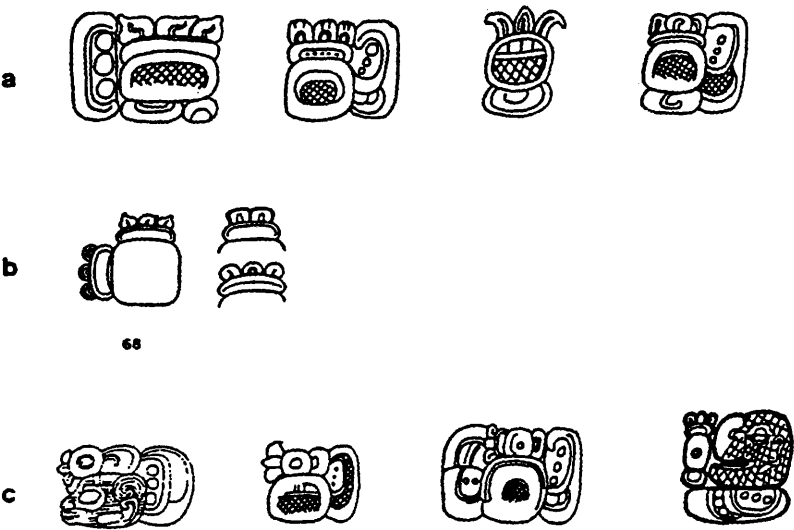


Figure 48.4. Several forms of the hieroglyph under investigation

	Date of T68+:586	Latest Date	Difference
Dos Pilas St. 26	9.14.10.0.0	9.14.10.4.0	-80 days
Naranjo St. 18	9.14.14.7.2	9.15.0.0.0	-218 days
Copán St. H	9.14.19.5.0	9.15.0.0.0	-260 days
Copán St. A	9.14.19.8.0	9.15.0.0.0	-200 days
Arroyo de Piedra St. 2	9.15.0.0.0	9.15.0.3.5	-65 days

3. The hieroglyph usually appears with period ending dates, although by no means always.
4. T68+:586 depicts only the core of the examined hieroglyph. Several affixes can be attached to the core: T1 or T679 as prefix; T181, T314-126, and T130 as postfix. The possible combinations that occur are depicted in Figure 48.2 and are dealt with in the section on the morphology of the verb.
5. The hieroglyph T68+:586 has a fixed syntactic position. It is the first textual glyph after the chronological passage that mentions the date (Figure 48.5). In four cases (Quiriguá St. J, Naranjo St. 18, Dos Pilas St. 1, and Dos Pilas St. 26) other, non-chronological hieroglyphs are positioned between the date and T68+:586.
6. One form of the hieroglyph *TUN* (Figure 48.6) is always found immediately after or in second or third position after T68+:586. The *TUN* hieroglyph can appear in

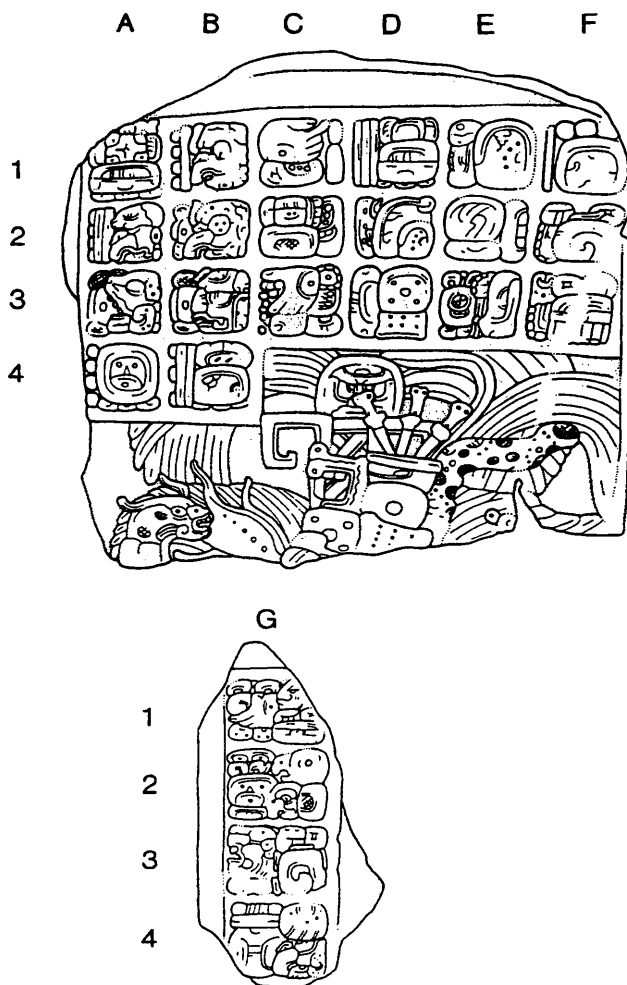


Figure 48.5. Arroyo de Piedra Stela 2

two variants: it appears either in the well-known basic variant of the *TUN* hieroglyph in its phonetic form *TUN*₂-(*ne*) or, equally widespread, in the variant T767.528.116 (Figure 48.7). Here the *TUN*-sign is combined with a symbol that depicts a tree or branch (Schele 1985b: 140). Schele and Stuart (personal communication, Aug. 1986) interpret both the *TUN* hieroglyph T528:116 and T767.528.116 as a symbol for “stela.” The word *tun* means “stone” in all lowland languages, and “tree-stone” (*te-tun*) is the name given to the stelae of Copán by the Chorti of the border area of Honduras and Guatemala (L. Schele, personal communication, Aug. 1986, according to information from N. Hopkins) [*te-tun* probably is a borrowing from Nahuatl *tetontli* “stove”]. Personified “tree-stones” are an iconographic element of the stelae of Copán (Schele and Miller 1986: 46).

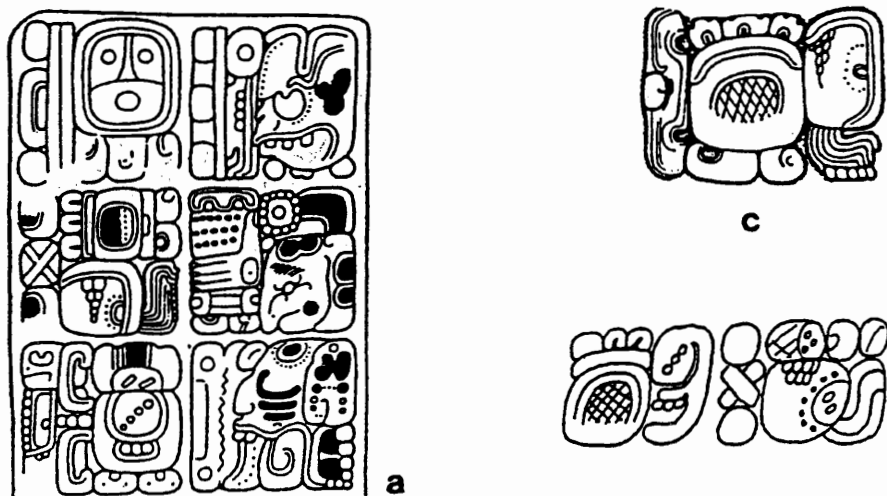


Figure 48.6. The investigated hieroglyph in connection with T528.116 *tun*

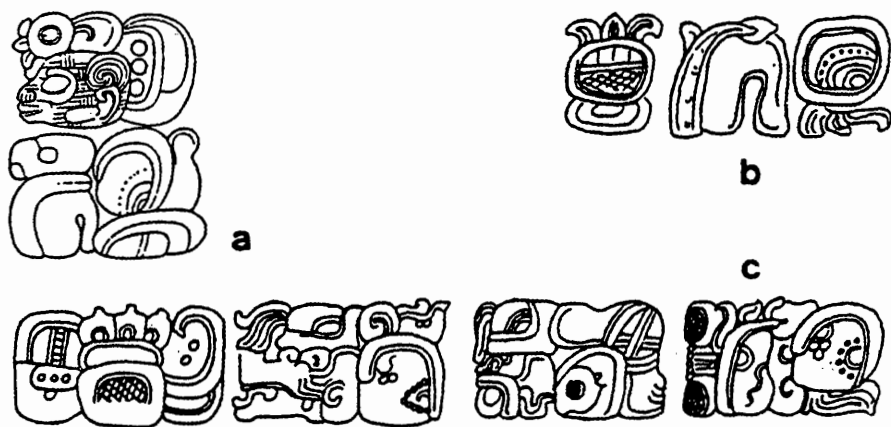


Figure 48.7. The investigated hieroglyph in connection with T767.528:116 *tetun*

7. As Stuart as shown (personal communication, 1986), the hieroglyphs between T68+:586 and the sign for “stela” can in many cases be interpreted as names of the respective stelae. In Quiriguá the sign TUN “stone” is frequently preceded by the sign AHAU and a coefficient (Figure 48.8). In that case, it concerns the name of the day of the latest date depicted on the stela and thereby also the date for T68+:586 (see 2 above). In a further section of the paper (syntax) it will be shown that the statement “n-AHAU-stela” directly refers to the iconography of the monument in question. The hieroglyphs between T68+:586 and the sign for “stela” refer—at least in a few readily demonstrable cases—to an attribute or a name of the stela.

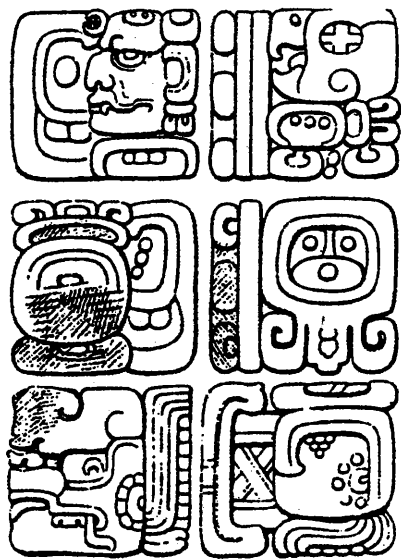


Figure 48.8. *Ahau-tun* on Quiriguá St. A, A9–B11

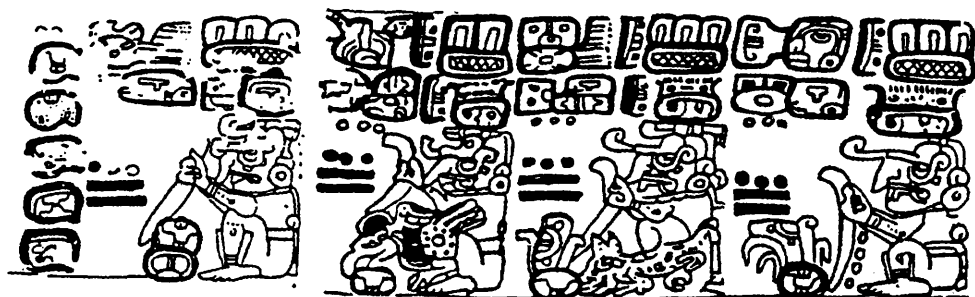


Figure 48.9. T68:586 in the Codex Tro-Cortesianus 27b–28b

THE CONTEXT OF IMAGE AND SCRIPT IN THE CODEX TRO-CORTESIANUS

The examined hieroglyph appears four times in the Codex Tro-Cortesianus (pp. 27b–28b; Figure 48.9). Due to the structural difference between the text of the codices and those of the inscriptions, the appearances of T68+:586 in the Codex Tro-Cortesianus will be investigated separately. Indeed, it turns out that the findings regarding syntax and the semantic aspect of the hieroglyph here correlate in all essential details with those of the inscriptions. The direct correlation between picture and text in the codices helps the formation of criteria for a further delineation of the semantic aspect of the hieroglyph.

In the Codex Tro-Cortesianus T68+:586 appears in the texts accompanying the four pictures of pages 27b–28b, which belong to an almanac of 5 x 52 days, and show God B with a digging stick in his hand (Figure 48.9). The syntactical structure of the accompanying text is uniform: The texts begin with mention of a cardinal directions in the

order West-South-East-North. The second glyph is T1.68+:586. Then follows the name glyph of God B, T667(:102) *cha-k(i)*, which itself has a color prefix that is associated with its own cardinal direction. Finally, in fourth place stands T1.156:526 *U-?-KAB*, "his . . . earth." The analysis of the syntax of the accompanying text, as well as the relationship between picture and text, leads to the following observations:

8. The hieroglyph under investigation is the only glyph in the accompanying texts that does not signify a cardinal direction, or an object (shown in the picture; God B, earth). When the texts beside the pictures are to be complete sentences, T68+:586 must be the missing verb. Except for the examined hieroglyph and the affix T156 over the sign *KAB* "earth," all elements of the text are readable. A preliminary fragmentary translation of the text may thus be formulated: "In the west/south/east/north—carries out the action of T68+:586—the black/yellow/red/white Chac—on/with (?) his (qualified by affix T156) earth."
9. It has been established in number 8 that the hieroglyph under investigation is a verb. Since the texts accompanying the pictures in the codices refer to the pictures themselves, and comment on and explain them (Whorf 1933), the analysis of the content of the picture can narrow down the semantic possibilities, which denote the lexeme of the verb, to such an extent that a semantic interpretation of the hieroglyph becomes possible.

Each of the four pictures shows God B with a digging stick in his hand. The bottom tip of the digging stick touches the sign T506 *K'AN/WAH*, from which, in three pictures, maize plants sprout. Moreover, the last of the four pictures shows a column of maize kernels falling parallel to the digging stick. The depicted act can therefore be interpreted as "sowing of maize," in which first a hole is drilled in the topsoil, which then receives several maize kernels. Two of the pictures include as additional information the representation of animals: a black bird and a mammal, both of them not further identifiable. Possibly this refers to the representation of maize pests.

The only information identical in all four pictures, depicted with God B as the agent, is the action "using a digging stick." Although this does not directly follow from the context of the picture, the manner in which the digging stick is used can probably be interpreted as "digging a hole in the earth."

FIRST LEVEL OF INTERPRETATION: THE SEMANTIC EXPLANATION

At this point we will continue with merely the semantic interpretation of the hieroglyph under investigation. In order to clarify the line of argumentation, the findings will be documented individually, will be kept apart during the argumentation of the interpretation and decipherment, and will be classified separately in every section of the interpretation. With this procedure it will be possible to take out or modify individual sections of the interpretation in case of contradicting pieces of evidence.

SECTION I OF THE INTERPRETATION:

The hieroglyph T68+:586 is a verb. Findings 5 (first hieroglyph after date) and 8 (first textual hieroglyph in the Codex Tro-Cortesianus after the cardinal direction) do not allow for another interpretation regarding word category. The place of the verb in the hieroglyphic text has to be the first position in the text (Schele 1982). The position of the verb in the hieroglyphic text is in agreement with the syntax ascertained from the historical linguistics (basic word order) of Proto-Mayan (VOS and VSO; cf. Norman and Campbell 1978) and Proto-Yucatecan (VO; cf. Hofling 1984). A reconstruction of the basic word order for Proto-Cholan does not yet exist. Also, finding 4 (affixes can be attached to the core T68+:586) is evidence for the interpretation of the hieroglyph as a verb. One may presume the root of the verb to be in the core, which consists of the parts T68+ and T586, and does not occur in altered form. The variable pre- and suffixes would then be indicators for the different inflections of the verb.

SECTION II OF THE INTERPRETATION:

The verb means "to drive something into the ground" and in the inscriptions has the meaning "to erect (a stela)." Finding 9 (the verb means "to drive an object into the ground" in the Codex Tro-Cortesianus) is already a clear reduction of the number of semantic possibilities that the hieroglyph under investigation may represent. The fact that the object that is being driven into the ground is always a stela in the inscriptions follows from findings 6 and 7. Evidently the stelae are usually erected at the completion of round dates, and the numerous other dates that can be found on the monuments mention events that happened before the erection of the stela and before the round date. Since the date of T68+:586 is by no means always a round date (finding 3) interpretations of the hieroglyph as indicating period endings, as suggested by several authors (Berlin 1970c: 10; Schele 1982: 182; Houston n.d.: 9), are not possible. Also, these interpretations do not agree with the occurrence of the hieroglyph in the Codex Tro-Cortesianus (finding 9).

Among the Classic Maya, stelae were erected by digging a pit, which would then be lined with stones or masonry. With the help of a ramp the monument would then be dragged by ropes, lowered down into the shaft, and fastened (Strömsvik 1942). The same technique is still used today by the Cruzoob-Maya of the Tixcal group in order to erect the Yaxche-tree in front of the sanctuary on the occasion of the principal "fiesta" (Grube 1986b). The fact that the hieroglyph T68+:586 occurs exclusively on stelae (finding 1), with the exception of its appearance in the Codex Tro-Cortesianus, is another argument for the proposed interpretation. Monuments other than stelae (such as lintels and altars) are not set up by "boring" them into the ground.

SECOND LEVEL OF INTERPRETATION:
THE GRAMMATICAL READING

The explanation of the examined hieroglyph as verb, meaning "to drive something into the ground," produced in the above section of interpretation, serves merely as an

aid in the search for a grammatical reading of the hieroglyph. Of the two signs of which the constant core of the hieroglyph is made up, unfortunately only T586 can be read with certainty. There is unanimity among all authors on the sound value of *pa* of this sign (Knorosov 1955a: 73; Kelley 1962a: 304–306; Kelley 1968a: 255–268; Justeson 1984: 346). The sign T68+ has received only slight attention in the literature up to now. Barthel (1977: 98) first used the reading *zuhuy*, or its translation “pure,” but later proposed a different reading (*ch’ah*).

First of all, both signs of the core of the hieroglyph will be examined as a unit, since after all that is how they occur. We are looking now for a grammatical reading for T68+:586 that will fulfill the following requirements:

- it must be the root of a verb,
- the root of the verb must mean “to drive something into the ground,”
- the root of the verb must end in *-p* or *-pa* (T586),
- and the desired explanation of the root of the verb must be documented in the Chol language, and/or the Yucatecan language.

The only lexeme that fulfills these requirements is *tz’ap*:

Proto-Cholan	* <i>tz’äp</i>	v.t. sembrar/drive into ground (Kaufman and Norman 1984: 134)
Chol	<i>ts’-Ap</i>	v.t. sembrar (poste) (Aulie and Aulie 1978)
Yucatecan	<i>ɔap</i>	encajar como cuchillo en vaina (San Francisco Dictionary 1976)
	<i>ɔap</i>	hincar en el suelo (San Francisco Dictionary 1976)
	<i>ɔap che</i>	encajar algún palo o madero en el suelo (Vienna Dictionary 1972)
Itzá	<i>ɕ’ap</i>	v.t. hincar (en el suelo) (Grube 1986c)
Mopán	<i>dzäp</i>	t.v. to put in/to drive something into something (Smailus n.d.)
Tzeltal	<i>tz’apel</i>	sembrar (poste) (Slocum and Gerdel 1971)
Tzotzil	<i>ɕ’ap</i>	pierce/with needle, nail or feather/place in a post hole (Laughlin 1975)
	<i>ɕ’apan</i>	t.v. stick in/nail, post, digging stick (Laughlin 1975)

I propose to read T68+:586 as *tz’ap*. We are dealing here with a monosyllabic root of a verb (CVC). From the examined occurrences of the hieroglyph it does not become clear whether T68+:586 is a phonetically written root of the verb (T68+ = *tz’a*, T586 = *pa*), or T68+ itself represents the root of the verb *TZ’AP*, and has in that case a logographic function. In this case T586 must be seen as a redundant phonetic complement. The fact that T68+ always appears together with T586 contradicts the redundancy of

T586, and supports a phonetic writing of the type CV-C(V) with synharmony in the omitted vowel of the second sign. In that case T68+ has the sound value *tz'a*. This sound was proposed for T68+ in 1978 by Peter Mathews in a paper on the dynastic sequence of Bonampak during the third Mesa Redonda in Palenque (D. Stuart, personal communication, Nov. 1986). Mathews did not carry his decipherment any further and did not discuss any occurrences of T68+ outside stela 2 of Bonampak, which he analyzed. The decipherment was not entered in the following publication (Mathews 1980), but does appear in the "Maya Hieroglyphic Syllabary" (Mathews 1984b) under number 85, with a sign that is the complete version of T68 (even T68+).²

In the following sections, investigations into the morphology of the verb, and the syntax of the sentence in which it occurs, will be added to the grammatical decipherment of the hieroglyph.

THE MORPHOLOGY OF THE VERB

Usually, in the hieroglyphic texts several affixes are attached to the root *tz'ap*. Only on Lamanai St. 9 does T68+:586 appear without other affixes (Figure 48.4, a). The possible combinations of the affixes are listed in Figure 48.2. Already several morphological rules may be deduced from that figure:

- T679 always has the postfix T181,
- the postfix T181 never appears with one of the allographic signs T1, T13, T204,
- T130 always appears with one of the allographic signs T1, T13, T204.

(The combination of suffixes T314-126 should be neglected here, because it only appears in one case on Quiriguá St. H.)

The three rules can serve together as argument against the theory held by Bricker (1985), that T1, T13, T204 as well as T679 are allographs. If we were truly dealing with allographs, we would expect T679 to appear with T130, or T1/T13/T204 to appear with T181. However, there is no evidence for either combination.

The most frequently appearing affixation of T68+:586 is with the affix T181, which at present is read by all researchers as *ah*. This reading is supported by an occurrence of the sign in Landa with the sound *ah/ha*. The hieroglyph appears twenty-two times with the suffix T181, and in twenty cases of those without a prefix. The absence of a prefix, or the potential, unrepresented null-morpheme, could be an indication that the verb represented by T68+:586 is intransitive, and in this case is written in the past tense or complete tense respectively. Under the assumption that the decipherment of the verb as *tz'ap* is correct, one must in any case expect a transitive inflection, since the verb *tz'ap* is a transitive verb in Proto-Cholan as well as in recent Chol languages. However, this is only a seeming contradiction, since we could also be dealing with the passive form of an originally transitive verb. Actually, in the eastern Chol languages (Manche-Cholti, Chorti) the passive tense in incomplete and complete ends with an -a, a morpheme that Kaufman and Norman (1984: 108) reconstruct as *-*aj* for Proto-Cholan. The formation of passive tenses in transitive verbs in Manche-Cholti and

Chorti uses CVC>CVhC-a. It is possible that the infix -h is not represented in the hieroglyphs.

Examples of this formation of the passive form are (after Kaufman and Norman 1984: 108):

<i>ch'ak</i>	<i>ch'ajk-a</i>	"be cut"
<i>paz</i>	<i>paz-a</i>	"be shown"

The second most common affixation, after the affixation of T68+.586 with T181, is with one of the allographic prefixes T1, T13, or T204, without suffix. T1, T13, and T204 are allographic signs for the ergative pronoun 3rd singular *u*. The analysis of the form *u-tz'ap* produces all kinds of considerable problems, since we can not be dealing with a passive tense (thematic suffix lacking), and the active tense of transitive roots in Proto-Cholan probably possessed status markers for all three aspects (Kaufman and Norman 1984: 100f.). Only in modern Chol is the incompletive aspect of transitive roots formed with the null-morpheme as status marker:

<i>woli?</i>	-	<i>k'el</i>	-	Ø	-	Ø	"he is looking at it" ³
progr./3Sg.E	-	SEE	-	inc	-	3Sg.A	

The form *u tz'ap* can be interpreted as 3Sg.E—DRIVE INTO GROUND—inc—3Sg.A "he drives/bores something into the ground." This interpretation remains speculative, however, as long as the existence of status markers for aspect in the speech of hieroglyphs can neither be demonstrated further nor denied.

Finally, there are only six instances of the affixation of *tz'ap* with T1/T13/T204 and the suffix T130. Based on numerous meaningful readings by most researchers, T130 is accepted as *wa* (first by Lounsbury 1973: 138); in addition, several authors have also proposed secondary sound values (Justeson 1984: 326 Vb; Fox and Lounsbury [in Justeson 1984: 326] "final w as reflex of earlier b"; Dütting 1985: 106f. *aan*). MacLeod, in her investigations of the verb morphology in the hieroglyphic script, cites instances from Chorti for the formation of a passive tense ending in -*wa* (1984: 79):

<i>a</i>	-	<i>pa'an</i>	-	<i>wa</i>	it is dug
3.Sg.E	-	DIG(inc)	-	pas.	

Examples of this construction of the passive form are nevertheless very rare. Compared to the frequency of suffixation of hieroglyphic verbs, which are apparently not positional (MacLeod 1984: 246), with T130, we should ask the question, if T130 next to *wa* cannot also represent a morpheme, that is, a suffix of a verb with a transitive root. In Yucatecan of the Colonial Period the subjunctive ending of verbs with transitive roots (Vb(tr)3; cf. Smalilus 1989: 51) was -V'b. In certain contexts the subjunctive aspect can indicate a very distant past.

THE SYNTAX OF THE TEXTUAL PASSAGES WITH T68+:586

The basic word order of transitive sentences in the hieroglyphic script reflects the syntax of spoken Maya languages. In the hieroglyphic script the basic word order of transitive sentences was VOS. The same basic word order has been reconstructed by Norman and Campbell (1978) for Proto-Maya (when the level of animation of the subject is higher than that of the object) and is the foundation of the syntax of the most recent Maya languages.

An analysis of the passages in which T68+:586 appears confirms this statement. Finding 5 (the examined hieroglyph follows immediately behind the date) can prove that the verb T68+:586 in fact occupies the initial position in the sentence.

The basic word order of the passages in which the examined verb appears is illustrated in Figure 48.3 using some selected examples. The fact that in very few cases an animated actor is involved (e.g., the name of a historical person) confirms the interpretation arrived at in the preceding sections that the majority of the verb forms are passive. On Machaquilá St. 11 (Figure 48.3, f) the name of the ruler of Machaquilá follows immediately behind the object *TUN₂-(ne)* “stone” (Houston 1983b: 24). This occurrence is grammatically not yet understood.

On Arroyo de Piedra St. 2 appears the passage T68+:586.181 *tz’ap-p(a)-AH2* “it is erected”—T.767’528 *U-TE(?) -TUN₂* “his stela”—T710.93:130 “(blood) is spilled?” followed by name (D3) and title (E1) of the supposed commissioner of the monument (Figure 48.5). It is syntactically interesting that the verb is followed by a possessed noun and another verb. The possessed noun is a further example of the “labeling” of inscribed objects (Houston and Taube 1987).

The object of the action of *tz’ap* is always the stela, indicated by *tun* or “stone-tree.” The attribute, which in numerous cases stands between the verb and the object, is syntactically part of the object, and represents one or more properties of the object.

On the stelae of Quiriguá, frequently “n Ahau” appears as an attribute of T528:116 *tun*. The size of the coefficient of Ahau is thereby identical to the coefficient of the Ahau day sign of the last date inscribed on the monument:

Appearance	Attributive	Date of erection
Quiriguá St. E (Figure 48.4, b)	13 <i>ahau-tun</i>	(9.17.0.0.0 13 Ahau 18 Cumku)
Quiriguá St. J (Figure 48.4)	8 <i>ahau-tun</i>	(9.16.5.0.0 8 Ahau 8 Zotz’)
Quiriguá St. A (Figure 48.7)	6 <i>ahau-tun</i>	(9.17.5.0.0 6 Ahau 13 Kayab)
Quiriguá St. D	7 <i>ahau-tun</i>	(9.16.15.0.0 7 Ahau 18 Pop)

The combination *n ahau-tun* is also present on other monuments than the four mentioned from Quiriguá and is also not limited to passages with T68+:586:

Quiriguá St. C (pedestal, e)	6 <i>ahau-tun</i>	(9.1.0.0.0 6 Ahau 13 Yaxkin or 9.17.5.0.0 6 Ahau 13 Kayab)
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Quiriguá St. F, D10–C11	1 ahau-tun	(9.16.10.0.0 1 Ahau 3 Zip)
Quiriguá St. K, C6	3 ahau-tun	(9.18.15.0.0 3 Ahau 18 Kayab)

This *n ahau-tun* formula labels the stela (*tun*) with the name of the day on which it was erected. Obviously, in Quiriguá stelae were erected on hotun period intervals and contained the names of the day *ahau* on which they were consecrated. It is interesting that in at least one case, stela A, the depiction on the front of the monument (Figure 48.10) directly correlates with the name “6 *ahau* stela.” The face of the dancing figure on this side of the stela has the typical mark of the head variant of the number six: it is a head with a hook nose, in front of it a medallion with the IK sign; the mouth is wide open, and the crossed bands of T552 are infixed in him. Finally, the big eyes contain a picture of an axe. A careful examination—which can not be performed in this setting—could perhaps bring proof that the representations on all the stelae in Quiriguá correlate with the coefficient of the *ahau*-name. Also, the attributive between T68+:586 and the “stela” symbol on the monuments from other areas should be examined in a future investigation about its correlation with the pictorial representation on the front of the stelae.

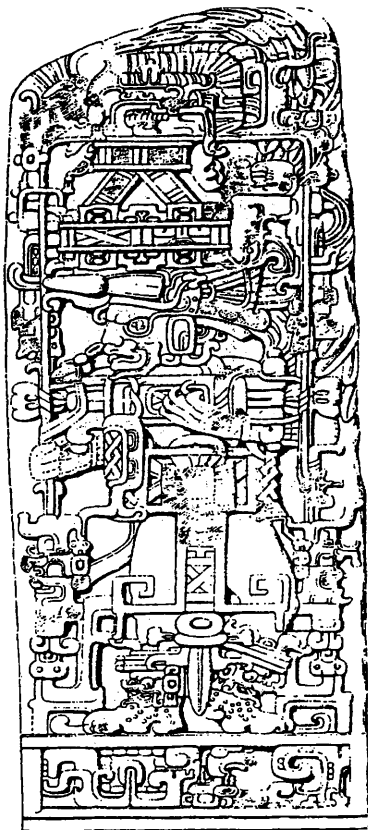


Figure 48.10. The sculpted facade of Quiriguá Stela A

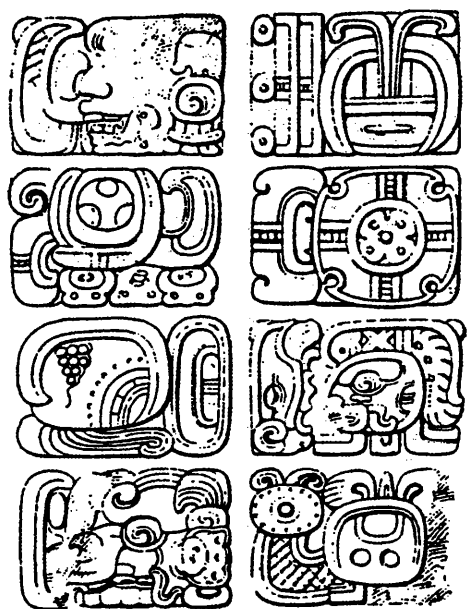


Figure 48.11. T588.181:178 in same context as T68+586: Copán Stela 9, A8–B11

THEMATICALLY EQUIVALENT HIEROGLYPHS

In the hieroglyphic script of the Maya more hieroglyphs occur that might refer to the erection of monuments. One of these hieroglyphs is T588a:178.181 (Figure 48.11). On Copán St. 9, A9 this hieroglyph follows immediately behind the date 9.6.10.0.0, the only (preserved?) date of the monument. It is followed by the hieroglyph T16.544v YAX-K'IN(?), an attribute of T528:116.24 TUN₂-(ne)-? “stone” or “stela” mentioned in the next hieroglyph. In addition the context is completely parallel to that of T68+:586 in Copán. The hieroglyph regularly appears in the inscriptions as introductory glyph of the 819-day-formula (Berlin and Kelley 1961), where it is always associated with a cardinal direction and its color. In the codices T588a.178.181 introduces passages that deal with the offering of animals in each of the four cardinal directions (Thompson 1972a: 98f. . . .). Except for these contexts, T588 appears with variable suffixes (T130 or T23) as the introductory glyph of the “concluding non-calendrical subphrase” on the incensarios from Copán. Riese interprets the hieroglyph in this context as “sacrificial rites to certain calendar days” (Riese 1989). In other places he interprets the hieroglyph semantically as “it is erected” (Riese 1989). The latter interpretation is in agreement with all contexts in which the hieroglyph appears. The phrases on the incensarios from Copán are in many regards constructed in parallel manner to the passages on the stelae in which T68+:586 appears as a verb: T588.130 is the introductory hieroglyphic verb, and is followed by an object supplied with an attribute (*sak laktun* “bright/white smoking vessel”; Riese 1989).

In the Codex Dresden another hieroglyph parallel to T68+:586 occurs (Figure 48.12). The pictures in the bottom sections of the four “New Year’s pages,” pages 25–28 in the codex, show scenes similar to the last: A God that holds a decapitated turkey in his hand scatters with the other hand a substance depicted by rows of dots (incense?) on

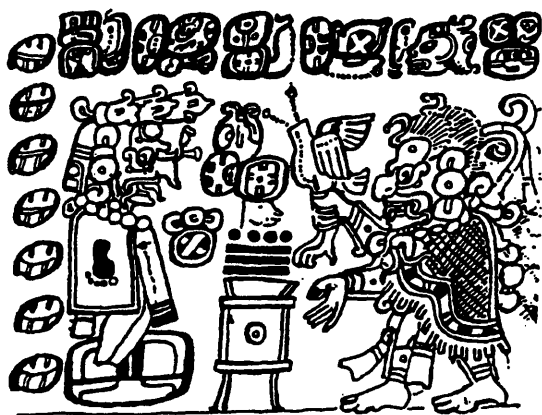


Figure 48.12. T68 above variable main sign in passage on New Year pages, Codex Dresden

an incensario or ritual vessel that is placed in front of a stela. Interestingly, the stelae on pages 26c–28c carry T528 markings just like the loops of affix T87, which are used to mark wooden objects. In the four pictures the stelae stand on pedestals, which are made up of the main sign T548 *TUN*. Obviously the stelae have been characterized as “tree-stones.” The hieroglyphic text accompanying the four pictures is crucial. The first hieroglyph in each of the four texts is T68 on top of a variable main sign (T592 or T593) with the verbal suffix T181 *AH*. The second hieroglyph in each of the texts consists of the elements T1009:87 *ITZAM-TE*, in front of which a color affix has been placed (p. 25c T109 *CHAK*, pp. 26c–28c T16 *YAX*). The hieroglyph following that always names one of the four cardinal directions. Assuming either that the main signs in the first hieroglyph are merely allographs of T586 or that they possess a sound value of pV, so that the first hieroglyph can be read *tz’apah* as in the inscriptions, the following paraphrase of the passage suggests itself: “It is erected—the red/green Itzamna-tree (name of the stela shown in the picture)—in the east/south/west/north.” T68+:592/593.181 also appears in the New Year’s pages of the Codex Dresden, apparently in passages that correspond syntactically and semantically in all details with the “passage of the erection of stelae.”

CONCLUSION AND OUTLOOK

One of the most frequently appearing hieroglyphs of the Classic Maya script is classified as a verb that, based on a number of independently obtained criteria, may be interpreted as the act of erecting a stela. On the basis of this semantic interpretation the grammatical reading of *tz'ap* "to drive an object into the ground" is proposed for the core of the hieroglyphic verb. With the grammatical reading we have reached the highest level of interpretation that can be achieved for individual signs of a writing system. The reading of the core of a hieroglyph as the root of a verb documented in the Chol language and Yucatecan language enables us to make an analysis of the morphology of the verb as well as the syntactical context in which it appears.

In this paper an attempt is made to maintain a strict separation between empirical findings and interpretations. That allows us to use the records to check and if necessary refute the steps of the argument proposed here.

The hieroglyphic decipherment of a verb whose meaning is the erection of stelae should provide an incentive to search for other hieroglyphs in the Classic Maya script that depict the manufacture, erection, and consecration of stone sculptures. The results to date in this area seem to indicate that the hieroglyphic texts on the numerous artifacts of the Classic Maya make much more profound statements about the meaning and function of the object on which they are written than had long been assumed. The veil of mystery may slowly be lifted from the stelae.

NOTES

1. I received ideas and suggestions for this work from Linda Schele and David Stuart. My special thanks go to Kornelia Kurbjuhn and Ortwin Smailus for the careful and critical reading of the manuscript.

2. On some polychrome ceramics, as well as on textual inscriptions from Xcalumkin, T68+ appears in a hieroglyph that can be semantically interpreted as the title of a scribe. After the completion of this manuscript, David Stuart drew my attention to the fact that this hieroglyph, which can be transcribed in full as T679.68+.59, can be read phonetically as *i-ts'a-t(i)*. In Yucatecan Maya the word *its'at* means "wise man." This is an additional and independent piece of support for the decipherment of T68+ proposed here.

3. Kaufman and Norman 1984: 95.

Epilogue

Knowledge . . . cannot foreshadow its own future conquests. I cannot forecast future inventions in any detail, without myself being the inventor.

Karl Popper (1982: 109)

With this statement Popper finds a paradox in predictions of future knowledge. We have difficulty enough disentangling the past. It is well-nigh impossible to speak confidently of future developments, since this presupposes knowledge yet to come. Nonetheless, here we try our hand at more modest prediction, addressing not so much Popper's "detail," which lies beyond present comprehension, as the general tendencies whose trajectories can be guessed from current research. There is only one solid assertion we feel is warranted. In all likelihood, epigraphers will not achieve a full decipherment of Maya script. At least three things make this so: (1) Colonial or modern lexicons do not always possess relevant words that might explain glyphs of known sound but unknown meaning; (2) there are insufficient contexts for testing the readings of *hapax legomena* or extremely rare signs; and (3) some logographs do not have the phonetic clues that suggest sound and homophonic meaning. In this assessment we are being realistic, not pessimistic. Even with recent advances in decipherment, epigraphic data present inherent limitations that clever technique and radiant insight cannot overcome. But readers take note. Unlike Eric Thompson, we do not believe such obscurity arises from ancient Maya intention; rather, it stems from the inadequacy of available sources. If identified, such defects may disappear with concentrated linguistic research and fuller, more energetic search for hieroglyphic texts. There remain many speakers of Mayan languages, and archaeological sites abound, many certain to yield inscriptions. In Maya epigraphy a single clue may open unexpected possibilities.

This, then, is our view of Maya epigraphy in the next decade. Logographs will receive greater attention, and epigraphers will look systematically for possible phonetic clues to logographic readings. With luck, we may detect a few more phonetic signs, especially those with glottalized consonants such as *t'* and *p'*. Epigraphers will develop more rigorous standards of differentiating poor, moderately strong, and certain readings. In doing so, they will need to define substitution ciphers more precisely. Increasingly, readings will be evaluated not so much on the basis of the person proposing them as on explicit procedures of decipherment, although, of course, these have their own problematic features, as historians of science suggest. A consensus about the structure and content of glyphic grammar

will come into place, with heavier attention to temporal and regional patterns of glyphic discourse and to site-by-site “genres” that reveal localized traditions. This work will need to be more heavily informed by historical linguistics, so that the language or languages in Maya writing can be situated within the branches of Mayan language development; in all likelihood, the thrust of this research will move toward closer scrutiny of eastern Cholan languages. Epigraphers will become more sensitive to the “synoptic fallacy,” which views Maya writing as a timeless, unitary phenomenon, something it surely is not. Distributional studies of phonetic and grammatical usage, structures of discourse, spelling conventions, and relations of text, image, and architectural setting will extract hitherto unsuspected patterns of a localized nature. Epigraphers will find additional orthographic subtleties and reconstruct features of the ancient Maya analysis of sound. Preclassic and Early Classic texts, notoriously difficult to understand, will be subjected to closer syntactic study. Comparison to Late Classic texts will help define their special features. The same holds true for the codices, which present special problems of linguistic underrepresentation and random orthographic reversal.

Documentation and computer encoding of glyphs will continue. Epigraphers will pay more attention to the archaeological context of texts and to the ancient positioning and carving of inscriptions with respect to viewers and readers (not necessarily the same individuals). The content of Maya script will be explored in a variety of ways. Epigraphers will emphasize ritual and the relationship of royal personages to supernaturals, at present still very poorly understood. They will also clarify the astronomical features of texts and iconography, with closer attention to proving or disproving such associations. Dictionary projects, perhaps modeled on cuneiform or Egyptological examples, will bring greater precision to our understanding of spelling rules, sign variance, and distribution. The introduction and acceptance of new systems of scholarly (and unscholarly) dissemination will probably lead to the blurring, reshuffling, or outright collapse of distinct epigraphic “schools.” Those unwilling to engage in open international dialogue will find themselves isolated and ignored. The rapidity and informality of dissemination will likely compound problematic issues of scholarly credit. The broadening of detailed interest in decipherment, especially through “Maya workshops,” will be accompanied by the inculcation of problem orientation and more pronounced stress on unsolved issues of decipherment. Indigenist groups will increasingly claim a part of epigraphic discourse and raise troubling issues for academics as they consider moral duty and intellectual responsibility. Underlying assumptions will not be presented (or accepted) *ex cathedra*, but continually refined. Epigraphers will enlarge the “core” of epigraphic knowledge; vigorous discussion will churn the “frontier.” It is unlikely, though, that faculty or research positions will expand to meet the need for student employment. Jobs in art history, lately an absorbent of epigraphic talent, will soon reach saturation. The situation is even more acute outside of North America.

We hesitate to say anything more about the future of decipherment. Most likely the list above reveals more about our hopes than about things to come. If this book should extend and deepen a historical view of decipherment, it will have been successful. If it leads to more incisive, more reflective epigraphic research, then it will have matched and exceeded our expectations. There is so very much to do. As the poet e. e. cummings says: “Listen: there’s a hell of a good universe next door; let’s go.”

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